

THE AMERICAN ELEVATOR AND GRAIN TRADE

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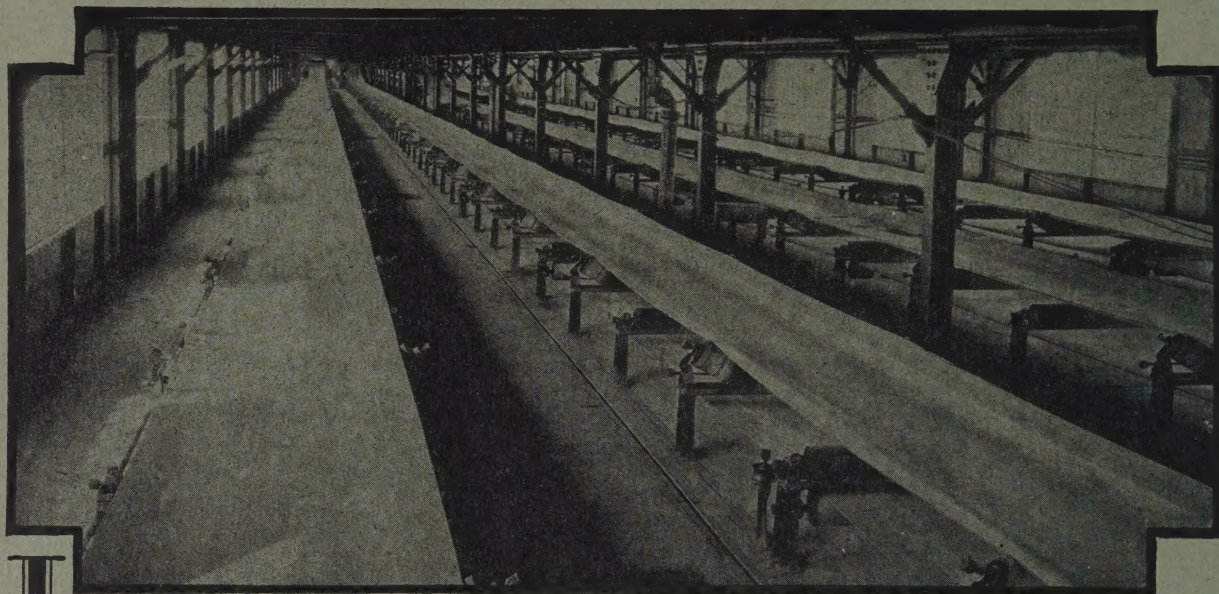
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CAPACITY { 200 Lbs. Coal
2 1/2 Bushels Grain

Can easily add Twenty-Five cents an hour to the value of a man's time who uses it in unloading Coal or Grain from box cars. Hence, in two weeks' use the Scoop-Truck will pay for itself and cost you nothing for its use thereafter. It will last for years and save the wearing out of a dozen common scoops in doing a like amount of work. Hundreds have tried it and will certify to the truth of these statements. Why not order now, and let the Scoop-Truck be giving itself to you?

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Whether it is a question of growing grain, storing it, milling it, or making belts to handle it.

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That is attested by the tremendous amount of Diamond Grain Belting now in operation—

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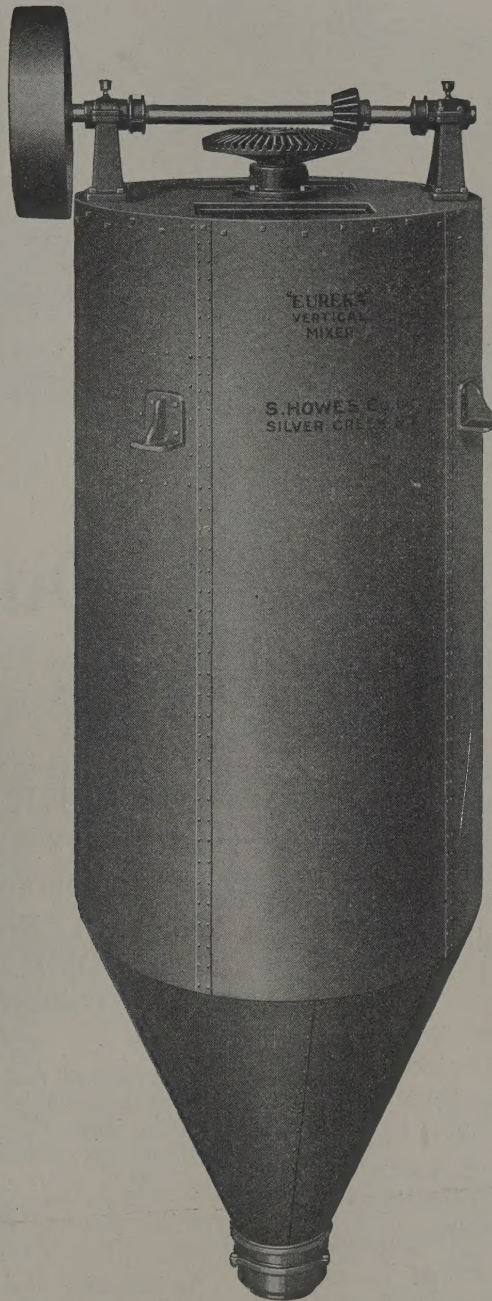
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"Grease It
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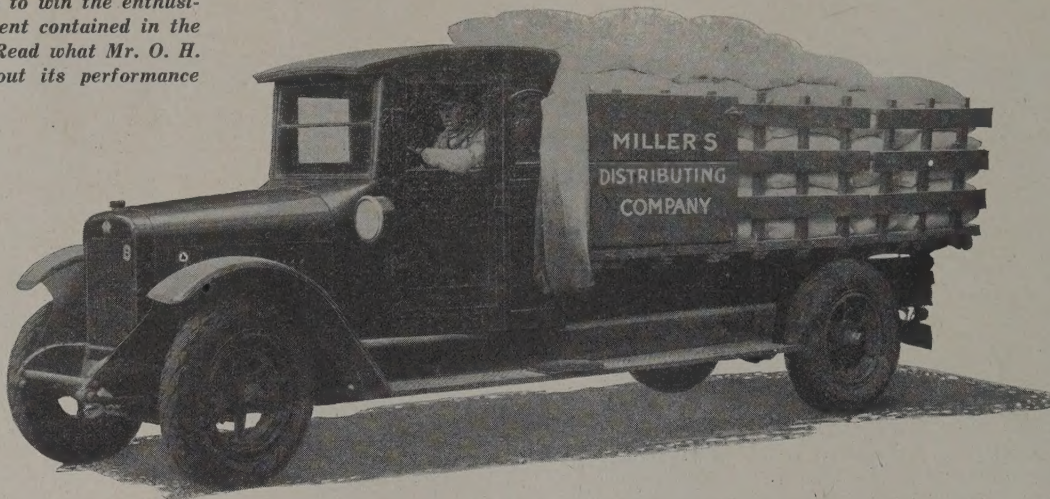
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O. H. Malm of Miller's Distributing Co., Des Moines, Ia., Says: "Economy of INTERNATIONALS is a Revelation."

"... We consider this truck has a very good record in view of the fact that it travels approximately 1000 miles per month, and is loaded to such an extent oftentimes that we hesitate to give weights.

"We feel that we purchased the ideal truck for our particular business in that it has the capacity for our loads and has the speed to cover the necessary ground in what we believe as short a time as would be possible with a much lighter truck, and with economy in the use of gasoline that was a revelation to us.

"With the assurance on our

part that we are thoroughly sold on INTERNATIONAL TRUCKS, we remain,

"Yours very truly,

"THE MILLER'S DISTRIBUTING COMPANY,

"(Signed) O. H. Malm."

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You, too, will find Internationals economical and dependable when you put them to work for you. If you are looking for a thrifty, sturdy truck, built for hard work and heavy loads . . . a truck that will earn money as it transports your products and supplies, visit the Branch or International Truck dealer near you.

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Of America
(Incorporated)

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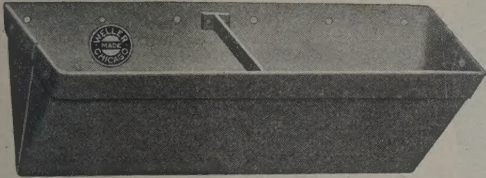
The International Line includes the ¾-ton Special Delivery; Speed Trucks for 1, 1¼, 1½ and 2-ton loads; and Heavy-Duty Trucks 2½ to 5 tons. Write for descriptive literature.

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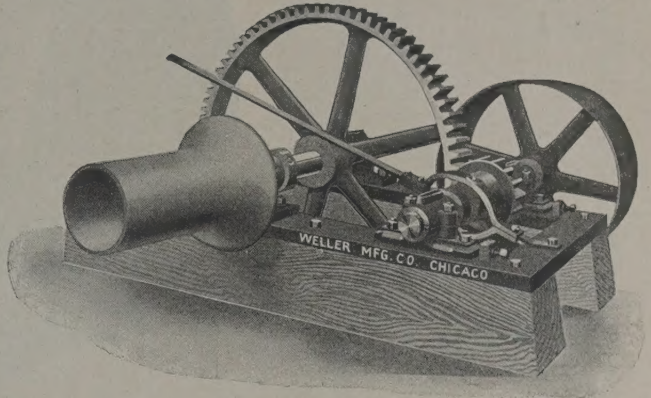
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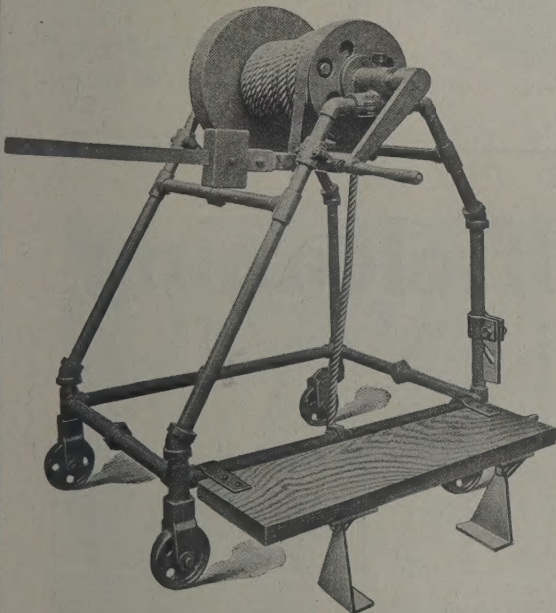
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Belt Conveyors
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Etc.



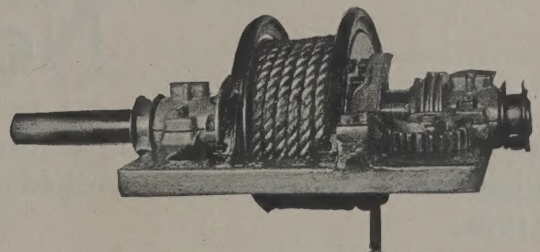
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Capacities 2 to 18 cars for manila rope or wire direct connected or for belt power.



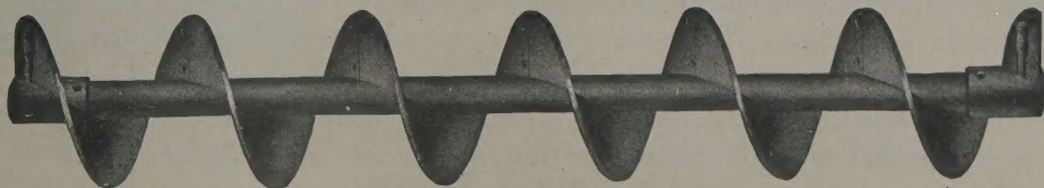
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Designed primarily for lowering men into grain bins for the purpose of repair work or cleaning bins.



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Positive in action—pulls at any point—no counter weights—no counter weight ropes. Easy on the operator—easy to install. Possible rope travel up to 100 feet.



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Cold Rolled Steel Sectional Flights. Wear Long. Evenly Balanced. Run True. Interchangeable with All Standard Makes.
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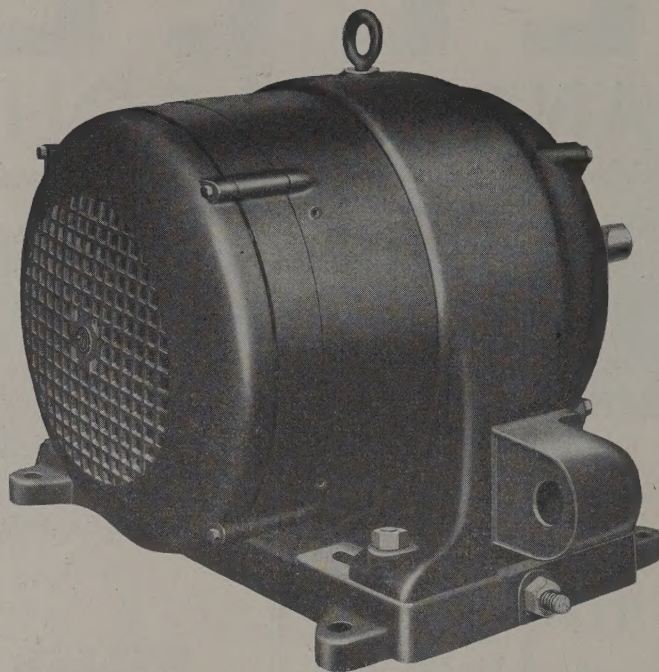
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Self-ventilating—Self-cleaning No piping!

A standard motor with all the features that industry expects from Fairbanks-Morse—but now furnished in an all-enclosed **self-ventilating type**.

On those jobs that formerly required breather and vent piping to the outside you can now install the F-M Type "HAC" Motor with all the speed, convenience and economy of a standard open type motor application.

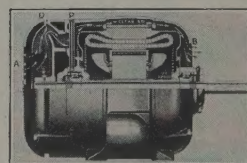
A specially designed fan pulls in air through the free end of the motor and expels all foreign particles. Clean air is then passed back through the ventilating spaces. The extra speed and economy of installation are secured without compromise to safety. Operating and maintenance men in every industry are acclaiming this motor as ideal for dirty and dusty drives.

Before you purchase your next enclosed motors be sure to get full information on this important Fairbanks-Morse contribution to the power problems of industry.

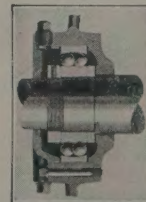
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28 branches at your service throughout the United States



- A—Air inlet at free end of motor
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- D—Vent for foreign particles thrown out centrifugally by fan
- B—Clean air flows around winding shield and exhausts at opposite end of motor
- P—Plunger device for greasing ball bearing without removing fan guard or bearing arms



Pioneer Manufacturers
of ball bearing motors

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MODERNIZE WITH WEBSTER EQUIPMENT

TRANSFER GRAIN ELEVATOR GREENVILLE, NEW JERSEY

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THE NORTHERN CONTRACTING CO.

Operated by

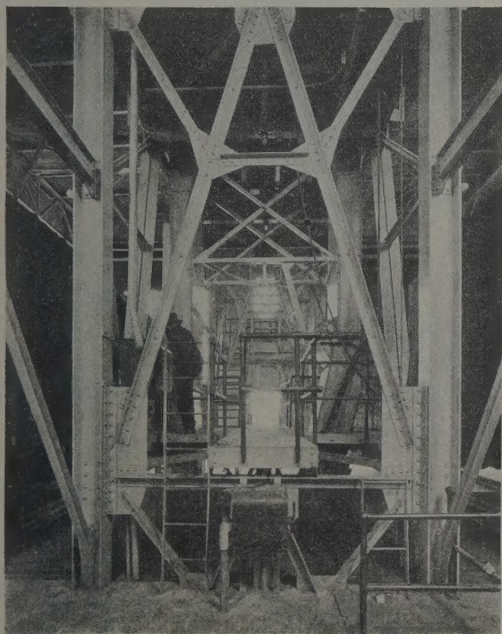
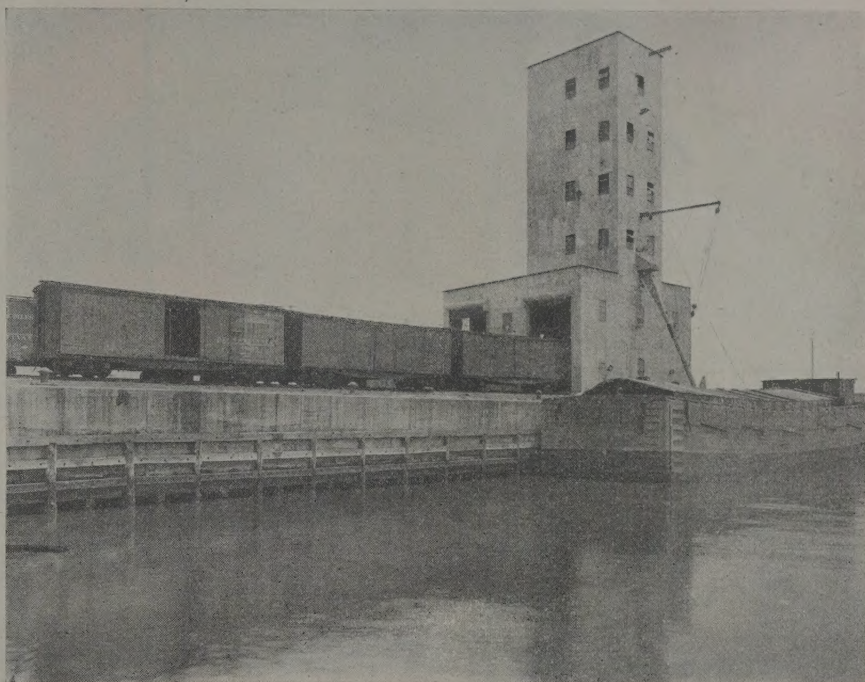
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Designed to transfer grain received in carload shipments over the Pennsylvania Railroad to barges for subsequent shipment into ocean going vessels.

Grain is received in cars on two parallel tracks running through the house and unloaded with two pairs of Clark-Beatty Power Shovels into track hoppers which discharge into elevator boot.

The track hoppers each have a capacity of one carload. Capacity of elevator is 15,000 bushels of grain per hour.

A Webster double drum car puller is located in the basement and is used to pull loaded cars into the elevators. The entire plant was designed and engineered by The Webster Mfg. Company.



Installations like this are an indication of our ability to meet modern requirements in design, manufacture and operation.

Webster designs and builds all types of grain handling machinery including belt conveyors, trippers, elevators, screw conveyors, dock spouts, distributing spouts, marine legs, power shovels, car pullers, etc.

This organization—with over fifty years of experience in designing and building suitable grain handling and market engineering skill and resourcefulness—is at your service.

We Make

Equipment for the Large and Small Elevator
Feed Mills, Flour Mills, Cereal Plants, etc.

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CHICAGO

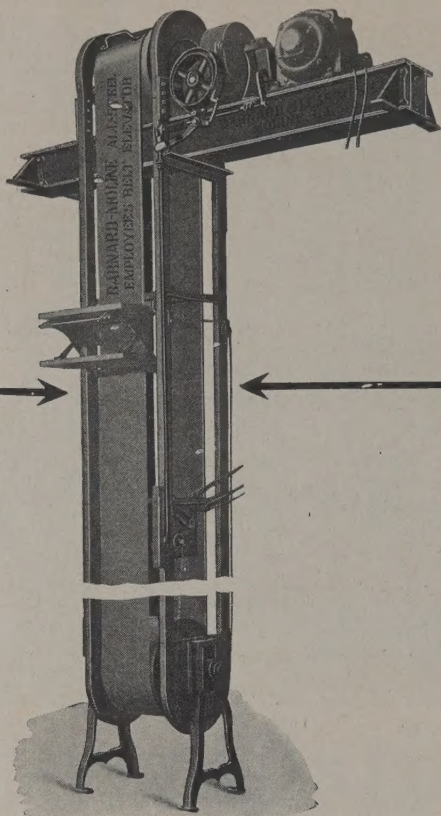
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GRAIN HANDLING EQUIPMENT

SAVING
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TIME
ENERGY = PROFITS
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Barnard-Moline Employees Belt or Service Elevator

By saving or conserving the TIME, ENERGY and HEALTH of your employees, you increase your PROFITS. These elements mean real money to you every day, every week, every month, every year. The installation of a Barnard-Moline Employees Belt or Service Elevator does just those things and furthermore, may secure for you lower insurance rates by guaranteeing prompt and regular attention to machinery and equipment in isolated or inaccessible parts of your plant.

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All Iron and Steel Construction—Long life—Minimum upkeep.
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Patented Automatic Safety Stop Device—Passengers cannot be carried over top.
Heavy Rubber Belt of high quality—Long life.
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Motor-Driven Type—Self-Contained with Silent Chain Drive—Easy and economical to install—Can be operated independent of other machinery.

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Established 1860

Southwestern Representative

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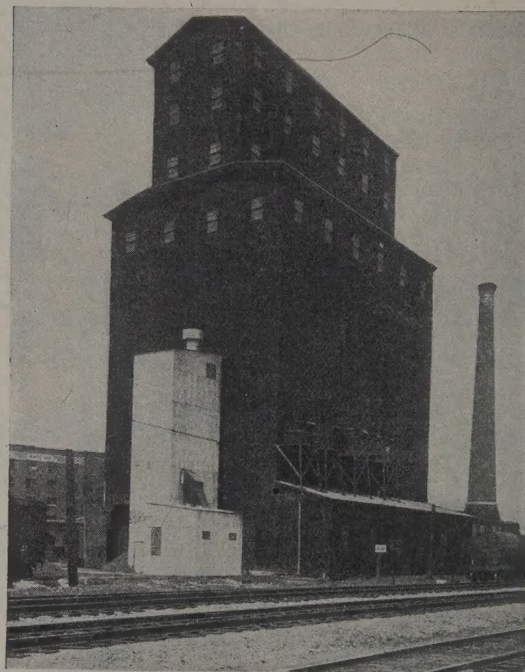
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—Made in all sized Capacity from 60 to 1000 Bushel per hour.

—Operated by the Randolph Direct Heat System or High or Low Pressure Steam, using Brass Fin Coils.

—Drier and Cooler equipped with Randolph Hydro Air Dust Collecting System.

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Davenport Elevator Company, Davenport, Iowa.

Equipped with a Randolph Direct Heat Drier of a capacity of 500 Bushels per hour.

Report on Grain Drying by the National Research Council of Canada

"(4) Batch drying, or drying where the Grain is not mixed by frequent movement, has been observed to cause marked local overheating of the grain, thus leading to proportionately greater injury.

"(5) Injury took place where the practice of circulation of air from the cooler to the drier was followed."

—These conditions do not exist in any Randolph Driers.

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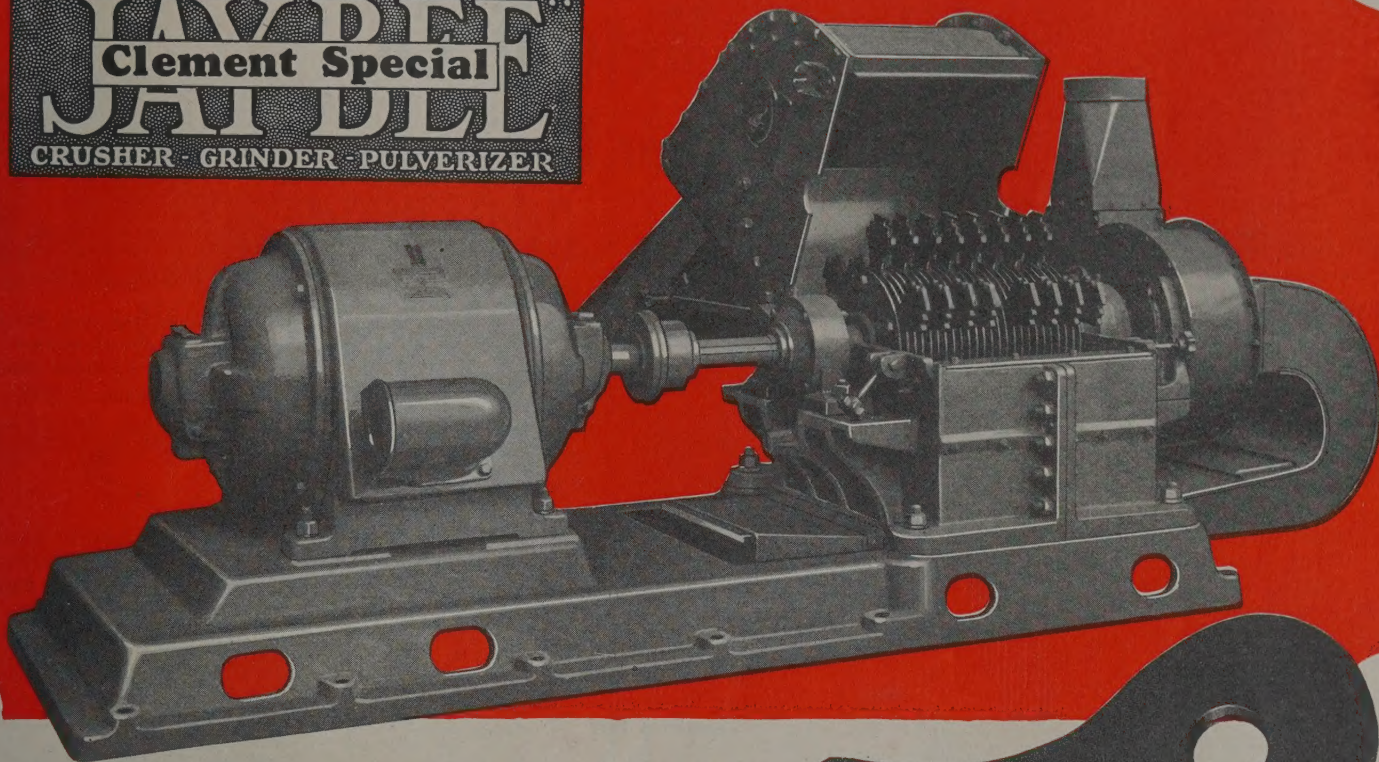
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JAY BEE

CRUSHER - GRINDER - PULVERIZER



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The Milling World Is Going "Jay Bee." Competition has proved it. And is proving it every day.

Three months ago a competitive test was made by a large milling plant on four of the best known feed grinders. Each manufacturer's salesman was trying "to do his stuff." The "Jay Bee" man got the order—for a Model "W" 75 hp. D. C. mill (illustrated above). Since then this same milling company has bought additional Model "W" 75 hp. D. C. mills.

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A "Jay Bee" mill will put more money in your pocket than any similar investment you can ever make. For business sake, investigate the "Jay Bee" before you buy a feed grinder.

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Jay Bee Sales Co., 442-444 Live Stock Exchange Bldg., Kansas City, Mo.
311-312 Terminal Warehouse Bldg., Omaha, Neb.

J. B. Sedberry Co., 819 Exchange Ave., Chicago, Ill.

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"Jay Bee" mill has 48
Manganese Steel
Hammers weighing 40
oz. each. Screen area
737 square inches. One
reason why it is the
"Dean of Heavy Duty
Grinders."

Partial List of Users of 75 H.P.D-C "Jay Bee" Mill

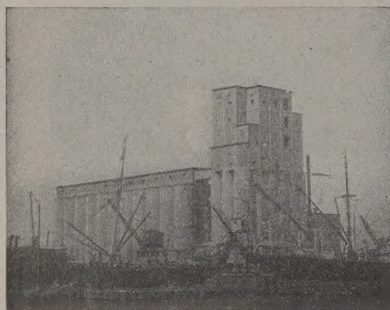
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Nutrena Feed Mills—2 Mills
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Dixie Mill Feed & Grain Co.—3 Mills
Kansas City, Missouri
Schrieber Milling Co.—3 Mills
St. Joseph, Missouri



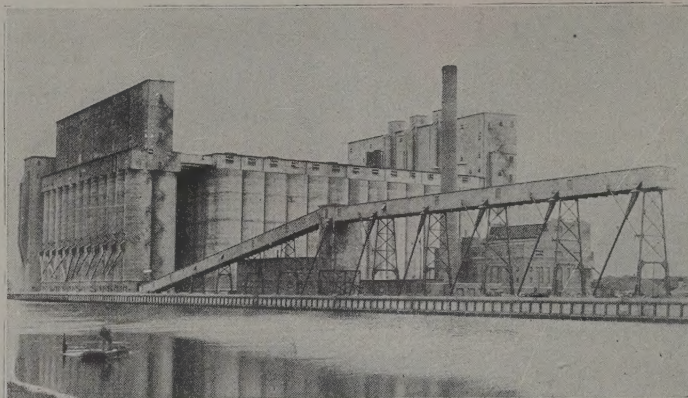
Manchester Ship Canal Elevator
Manchester, England
Capacity 1,500,000 Bushels
Completed 1914



Buenos Aires Elevator Co.
Buenos Aires, Argentina
Capacity 750,000 Bushels
Completed 1920



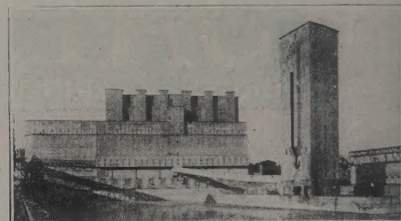
John S. Metcalf Co. Grain Elevator Engineers



Chicago & North Western Railway Elevator
South Chicago, Illinois
Capacity 10,000,000 Bushels
Completed 1920

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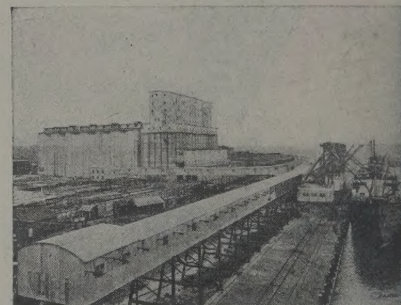
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Sydney, Australia	- - -	Pitt Street
London, England	- -	33 Henrietta St., Strand
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Montreal, Quebec
Capacity 2,600,000 Bushels
Completed 1912



Sydney Terminal Elevator
Sydney, Australia
Capacity 6,400,000 Bushels
Completed 1921

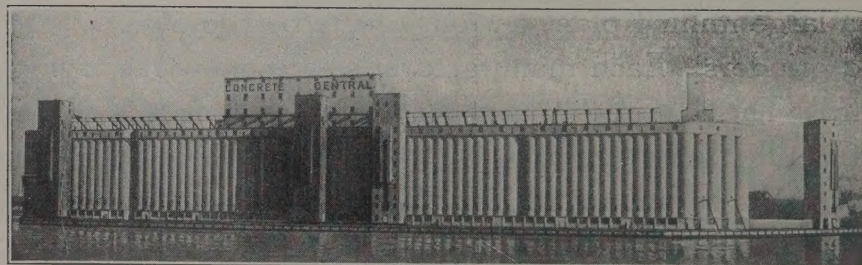


MONARCH

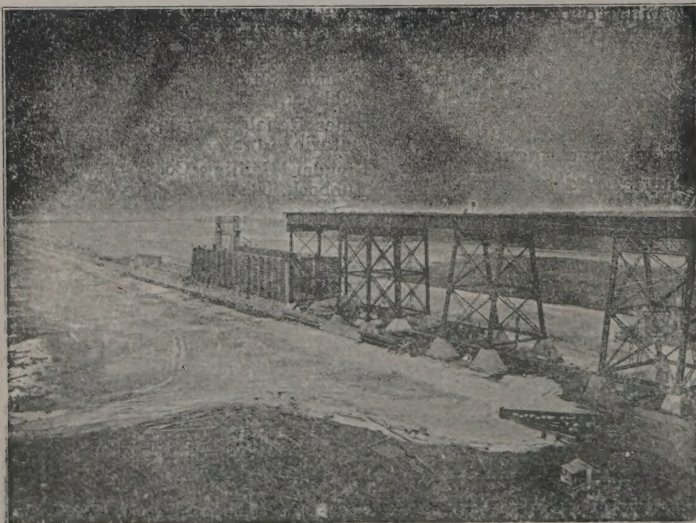
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Satisfaction
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ZELENY THERMOMETER SYSTEM

who would come back.

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Portland is in the heart of the agricultural region of the Pacific Northwest. It also has an abundance of cheap, hydroelectric power for manufacturing purposes, good ocean and railway shipping facilities and a fair supply of skilled labor, practically all of which is non-union.

Portland is also an ideal place to live. It has a mild climate, good water and plenty of nice hotels, apartment houses and homes. Also good schools, theaters, libraries, clubs and parks.

I would be pleased to serve you in the location, design and construction of that new mill of yours.

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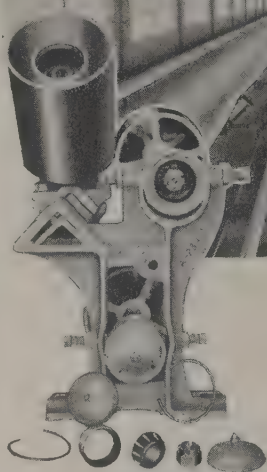
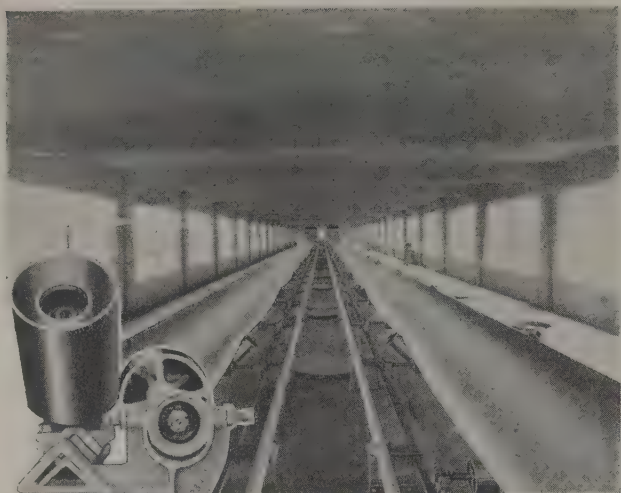
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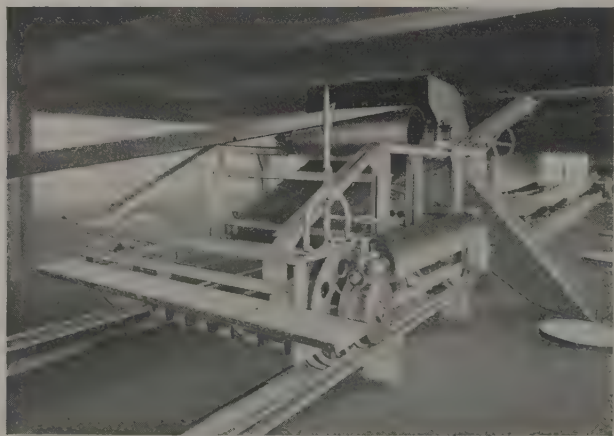


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THE illustration above shows an "Ehrsam" Timken bearing-equipped conveyor—and the lower illustration shows an "Ehrsam" heavy duty self-propelling tripper—both just recently installed in an addition to a large southwestern elevator. Additional "Ehrsam" equipment was installed too. For the name "Ehrsam" stands for quality elevator equipment in the industry.

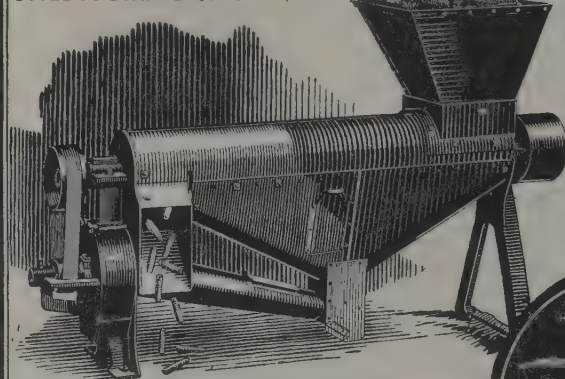
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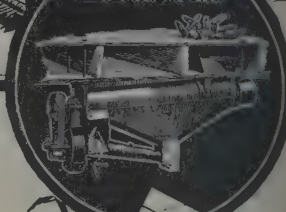


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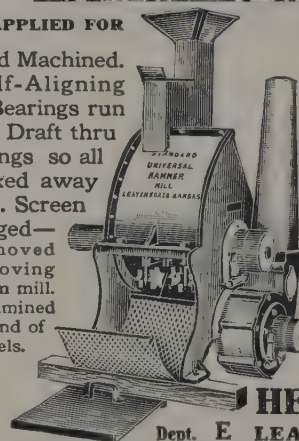


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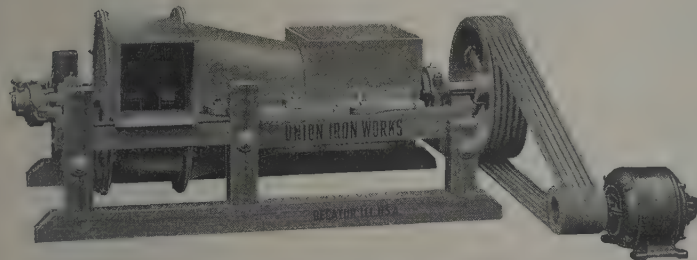




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Wheat Washing

V E R S U S

LIMING and SCOURING



DIRECT comparison of the

relative merits of wheat washing versus liming and scouring has just been made in a large terminal grain elevator on the Pacific Coast.

Shippers who originally were skeptical about wheat washing now demand washed wheat in preference to wheat that has been limed and scoured in smutters. This rapidly increasing preference is clearly shown by the following comparative figures:

Season	Washing	Wheat Cleaning Volume Scouring
1924-1925	51%	49%
1925-1926	69%	31%
1926-1927	72%	28%
1927-1928	(not yet available)	

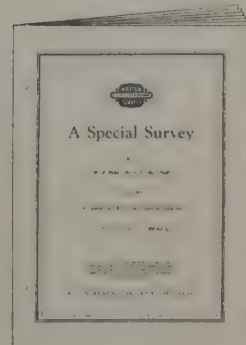
In addition, the wheat washing process costs this terminal elevator 51% less than the lime-scouring process!

Two Wolf Wheat Washers have been in use in this elevator since 1925. Two more Wolf Wheat Washers have recently been ordered because of the constantly increasing preference of shippers for washed wheat, as well as the large saving of the washing process for the elevator.

The foregoing facts, as well as many others of equal interest were disclosed by an impartial survey made by an independent firm of industrial cost accounting engineers.

A limited number of copies of the report of this survey are available for distribution (without cost or obligation, of course) to elevator operators who want to improve their wheat cleaning methods and also reduce their costs.

We shall be glad to send you a copy of the report of this survey. Ask for the Pacific Coast Grain Terminal Elevator Survey.



THE WOLF COMPANY

68 Commerce Street

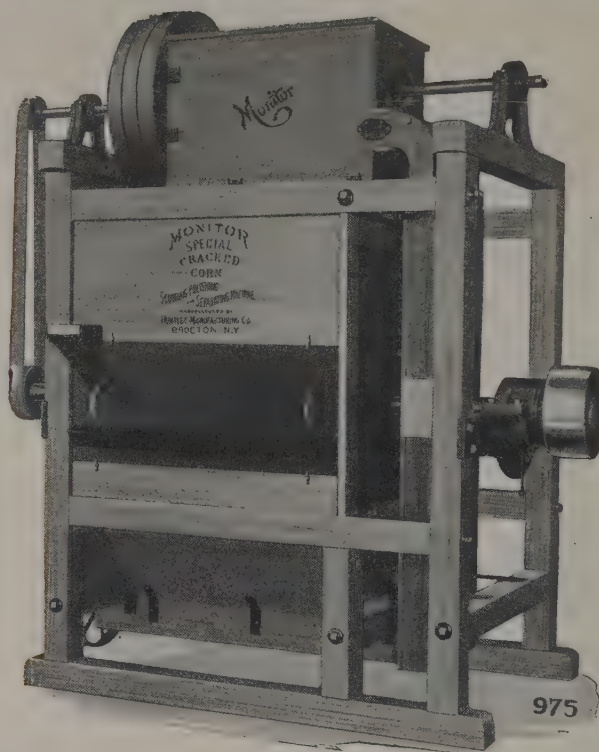
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Established in 1882.



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Established in 1882.

VOL. XLVII

CHICAGO, ILLINOIS, NOVEMBER 15, 1928

NO. 5

Pools Erect New Elevator at Port Arthur, Ont.

Saskatchewan Pool Terminal Elevator No. 7, Adds Over 7,000,000 Bushels to the Storage Capacity at the Head of the Lakes

THE Saskatchewan Pool Elevators, Ltd., is now entering into the fifth year of its existence. During its brief lifetime, it has bought and paid for the vast elevator system of the Saskatchewan Co-operative Elevator Company and has conducted a building program that has practically doubled the facilities of the former company. Year by year it has handled an increasing proportion of the Saskatchewan crop through its own elevators, until now it is in a position to handle about one-half of the total crop.

In an address at the formal opening of the latest acquisition of this organization—namely, Saskatchewan Pool Terminal Elevator No. 7, at Port Arthur, Ont., C. D. Howe, consulting engineer, said, in part: "The farmers' organizations have followed a wise building policy. They have given their operating officers and engineer a free hand in working out details, and have refrained from asking for changes in layout after contracts have been awarded, thus avoiding extras, which are the bane of all concerned. Their custom of paying progress estimates with great promptness has made them very desirable customers, and as a result they receive the keenest competition from contractors. In their terminal construction our experience leads us to believe that these farmers' organizations have obtained better value for money spent than any other class of elevator owners."

The exterior of the entire building in the case of No. 7 is being painted with a specially prepared preservative paint, which is weatherproof and waterproof, and besides lending a trimness to the plant, it will be an economy in the long run. All of the metal spouting, machinery, stairways and other metal parts of the equipment of the house have received a coat of aluminum paint, which was put on with air guns. The building was designed and supervised by C. D. Howe & Co., Port Arthur, Ont., and the work was done by The Barnett-McQueen Construction Company, Ltd.

The property on which Pool Terminal No. 7 has been erected was purchased from the Northern Elevator Company, Ltd., on November 28, 1927. The property included a water lot 2,160 feet long and 400 feet wide, and a parcel of land triangular in shape, about 600 feet long and 400 feet in greatest width, the latter being used for approach tracks. The company has deeded a strip of its

water lot 130 feet in width to the Dominion Government for a public slip, and this, with property similarly deeded by the adjoining Thunder Bay Elevator, provides a boat loading slip 200 feet wide, extending the full length of the water lot. This slip has been dredged by and at the expense of the Dominion Government, under the direction of F. Y. Harcourt, district engineer, and his staff, and this dredging work was conducted with a minimum of interference with construction of the elevator. According to C. D. Howe, consulting engineer, the site chosen is probably the only one at the Head of the Lakes capable of economical development, and large enough to provide a well balanced development for an elevator the size of this one.

About the middle of December tenders were called for the foundation work, and on January 12 this contract was awarded. This work included en-

led on March 19, and the contract was awarded to the Barnett-McQueen Construction Company, Ltd. on April 17. The contractor undertook to complete the large contract, except for the outshore storage annex, on October 15. The first two cars of grain for testing purposes were taken into the elevator on October 15, and the elevator is now in commercial operation. It expected that this contract will be entirely completed, except for the outshore storage annex, and will be placed in operation on or before December 1, an unusually expeditious handling of so large a job.

"I believe that the records now being made in the time required for constructing grain elevators are rather remarkable," said C. D. Howe. "When I first started in this work two building seasons were required to build an elevator, and had it been suggested that construction work could be com-

menced after January 1, and the elevator be handling grain in autumn of the same year, anyone would have said that the suggestion was ridiculous. Present rapid construction has been brought about by designing with rapid construction particularly in view, by a high degree of efficiency on the part of the general contractor, and by confining purchases to a selected list of highly organized and efficient subcontractors. Had all material for the superstructure contract been delivered by railway cars, about 3,900 cars would have been required, making a train 30 miles long. To assemble all this material and have it arrive exactly as required was in itself an

achievement for which Mr. Whitehead and his staff are to be congratulated.

"As fill for trackage was being placed while the elevator superstructure was being built, but little room was available for use of the contractor. Owners of adjoining properties were most obliging in permitting use of their land for this construction. All sand and gravel were handled over the dock of Stewart Terminal, and stored on that property. The Bawlf Dock was also used for storing gravel. Thunder Bay Elevator and Government Elevator properties were used for building forms, which were made up and brought to the work by scow. The contractor had a tug and several scows constantly at work bringing materials to the elevator, and lack of land space thus was offset.

"The elevator structure contains 95,000 cubic



SASKATCHEWAN POOL TERMINAL NO. 7, AT PORT ARTHUR, ONT.

closing the water lot with a sheet pile revetment, and driving piling under the various building areas to rock. In doing so, 19,642 pieces of round piling were furnished and driven, the piling being cut specially for this work and delivered to the site by rail. In addition, 1,890,000 F. B. M. of fir timber for sheet piling were shipped in from British Columbia, made up tongue and grooved, and driven in place; and 298,600 pounds of iron fastenings were used to secure the sheet piling in place. A railway trestle was built for the full length of the property for handling track fill. Material for the contract required 368 carloads of piling, 86 carloads of fir timber, and seven cars of iron fastenings, a total of 461 carloads of material. This contract was completed April 15, on schedule.

Tenders for the elevator superstructure were cal-

yards of reinforced concrete, for which over 4,000,000 board feet of lumber, 500,000 bags or 500 carloads of cement, 110,000 cubic yards of sand and gravel, and 6,500,000 pounds of reinforcing were used. These reinforcing rods, if placed end to end, would total over 1,200 miles in length. Structural steel inclusive of car dumpers totals over 1,450,000 pounds in weight. The plant contains 177 motors, totalling 5,736 horsepower. Conveyor and leg belting of five and seven-ply has a total length of 35,490 feet, or over 6.7 miles of belting. The sheet metal spouting and dust collector contracts are the largest ever placed in elevator work. Equipment includes 52 helical gear reduction sets, 17 trippers, and about 15,000 elevator buckets. The general superstructure contractor's payroll will be over \$700,000, and when payrolls of other contractors and local sub-contractors are added, probably nearly \$1,000,000 will have been paid out to local labour. I would suggest that those agitating for higher taxation on elevator properties give this last information their careful consideration.

"It has been the universal practice in developing similar water lots to build the elevator tracks on timber trestles, to avoid interference with construction work on the elevator. These trestles have a life of about 10 years, after which they must be filled or undergo extensive repairs. For Pool Terminal No. 7 we found that a gravel fill would cost considerably less than a timber trestle, and as the fill would make a permanent job we decided to build the fill instead of the trestle. We have found by experience that our former idea of the difficulties of building the fill while elevator construction was proceeding were not exaggerated. However, with full co-operation from Canadian National Railways, and by constantly keeping the fill coming along, we have managed to get in the bulk of the fill rail. We are now bringing in the balance by barge, and completing the work as fast as the contractor can get his equipment out of our way. We expect to complete the last of the trackage in November.

"Canadian National Railways undertook the work of hauling and placing fill for trackage at a price that was estimated to be their net cost. The railway has used an immense amount of equipment in placing the fill, and have done everything possible to expedite the work. In addition, Canadian National Railways have made a large expenditure in extending and re-planning their main storage yards and spurs to adjoining elevators, and have now provided facilities for delivering cars to the elevator that are as near ideal as can be devised. I wish to express my appreciation to Canadian National Railways officials who are responsible for this work, and particularly to Mr. Walton, general superintendent; Mr. Richardson, terminal superintendent; and to Mr. O'Leary, terminal engineer, of whom the latter has been in direct charge of the work and has laboured with us in placing track fill.

"Over 300,000 cubic yards of fill were delivered on your property, or about 11,000 carloads. Thus the total material delivered to your site, including foundation, superstructure, and track fill, amounts to 5,500 carloads, or a train 42 miles long. The same train would haul over 8,000,000 bushels of wheat, or more than the capacity of the elevator. The total storage capacity is well over 7,000,000 bushels. Of this 900,000 bushels is in the workhouse, and the remainder in the two storage annexes."

The tracks are provided for unloading, each car dumper being served by two tracks both out-shore and inshore. Each track holds 23 cars, so that the railway can place 230 cars on track for unloading at one spot. By serving each dumper with two tracks cars can be spotted with a minimum of delay to the unloading operation.

Car unloading is handled by five car dumpers. Each dumper is capable of an average unloading of seven cars per hour, or total unloading capacity of 35 cars per hour. The plant is designed to handle 400 cars in the ordinary 12-hour day, and 500 cars per day under peak operation by using a night crew. Elevator legs are provided as follows: Five receiving legs at 25,000 bushels per hour; Six

shipping legs at 25,000 bushels per hour; 14 cleaner legs at 8,000 bushels per hour; two screenings legs at 8,000 bushels per hour; and one drier leg at 8,000 bushels per hour. Weighing for both receiving and shipping is by 2,500-bushel scales, of which 11 are installed in the cupola of the new elevator.

Shipping capacity to boats is 150,000 bushels per hour. Nine boat spouts are provided, each spout drawing from two shipping bins. Shipping bins have a total capacity of 90,000 bushels. A well equipped marine leg is provided, so that in the event that a cargo does not grade as expected the grain can be unloaded back into the elevator. The loading out dock is of length to enable three boats to tie up at one time, and six boats can be tied up in the slip for winter storage.

A particular feature of the structural design is the large number of bins provided in the elevator. This number totals 683 bins, varying in size from 32,000 bushels for the large circular annex bins to 4,000 bushels for the small bins. The large number and variety in size of bins should help considerably to overcome the difficulty in handling the large number of grades now arriving. Bins are arranged for convenience in blending grain, and a large proportion of the elevator capacity can be drawn off to a single belt.

Particular attention has been given to the distribution of grain within the elevator, as the greatest flexibility is necessary for the convenient operation of so large a unit. Forty-nine garnerers of 3,000 bushels each are provided above the scales as reservoirs for the various leg discharges. Each scale and garner can discharge to any one of eight 42-inch belts, four belts delivering to each storage annex. In addition all scales and garnerers deliver to a reversible cross belt for distribution within the workhouse, the cross belt also delivering to the drier garner. Each storage annex is drawn off by four 40-inch basement belts.

The cleaning equipment is installed sufficient to balance receiving capacity. The work floor contains 20 No. 11 Monitor Receiving Separators, made by the Huntley Manufacturing Company, 20

other grain separators, and 12 disc separators, so arranged that each car of grain can be cleaned over the most suitable type of machine without transferring. Screenings are handled separately from tailings, each having a separate screw conveyor and leg. Screenings are separated over three No. 11-B Monitor Screenings Separators and then over two double disc units, top disc being wheat and oats separator, and lower disc a seed separator. Tailings are separated over two Monitor No. 81 Scalping Shoes to take out straw joints, then through a Monitor Wheat Head Thresher, then through a disc machine to separate wheat and oats. Electric hoist and drill and leather belts were supplied by the Canadian Fairbanks Morse Company.

Features of machinery and equipment are high torque push button operated motors for driving all legs and conveyor belts, double helical gear reduction sets for driving all legs and conveyor belts, and specially designed roller bearings for all conveyor stands and concentrators, tripper bearings, cleaner machine bearings, and car dumper bearings.

The drier is a 1,000-bushel per hour steam drier, equipped as recommended by the Canadian Research Council. Drier and boiler house structures are built to permit installation of a second similar unit when required. A complete and adequate electrical substation is installed, as well as a well equipped millwright shop, an air compressor system; a steam heating plant for offices and millwright shop, and an unusually complete dust collector and ventilating system.

Comfortable and conveniently located offices are provided throughout the plant for the elevator operation, and for the Government inspection and weighing staffs. A system of intercommunicating telephones extends to all parts of the plant, supplemented by horn and lamp signals and garner alarms. Comfortable welfare rooms are provided for the staff. City water with outside hydrants for fire protection is installed. Full provision has been made for building additional storage at both ends of the present tanks. The workhouse will easily handle twice the present storage capacity.

Growth and Distribution of Grain Elevator Storage in the United States

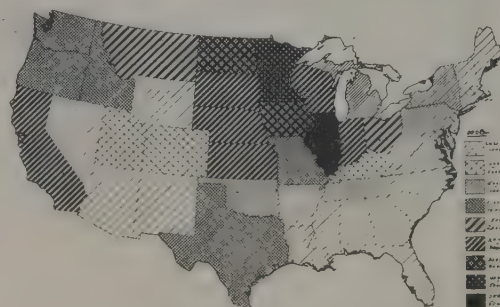
By E. A. DUDDY

School of Commerce and Administration, University of Chicago

(Continued from Page 201, October issue)

COUNTRY ELEVATOR STORAGE

In the license list of the United States Grain Corporation for the year 1918, a total of 21,542 country elevators is reported with total capacity of 521,284,000 bushels. This is 31 per cent more than



University of Chicago Press
COUNTRY ELEVATOR SPACE 1918

the combined totals of terminal elevator and mill elevator space as given in the same report.

A count of country elevators made by *Grain Dealers Journal* of Chicago in 1927 shows 17,696 (92.4 per cent) in the grain surplus states, and 1,450 (7.6 per cent) in the deficit states, a total of 19,146 for the country. Since there were 21,542 country elevators in 1918, according to the report of the United States Grain Corporation, there has been an apparent loss of 2,396 elevators in the interval. Part of this loss may be due to the fact that the count of the *Grain Dealers Journal* may not be

as complete as that made by the Grain Corporation.

Upon analysis, it appears that in 1918 there were in the surplus grain states 19,520 country elevators, or 90.7 per cent; in the deficit states, 2,022, or 9.3 per cent.

When the losses over the period are analyzed, it is found that the loss in the surplus states was 1,824 elevators or 9.3 per cent of the total. In the deficit states, the loss was 1450 or 28 per cent of the 1918 total. The loss in the deficit states is relatively greater. This would indicate that perhaps much of the storage reported in 1918 was only temporary in character due to war needs. It also points to the increased diversification of farming practice in these states.

An approximate total country elevator capacity figure may be derived from the data. With total capacity and total number of elevators given in 1918, an average capacity of 24,190 bushels per elevator is obtained. If 24,000 be taken as the approximate average capacity of elevators now in existence, the total country elevator capacity in 1927 was not far from 459,504,000 bushels. This would indicate a loss of approximately 61,780,000 bushels¹ since 1918.

The facts with regard to grain elevator capacity and the distribution of this capacity among interior markets and ports are indicated in the following lists. The figures are drawn principally from the reports of boards of trade and chambers of commerce of these markets and represent bushels, in-

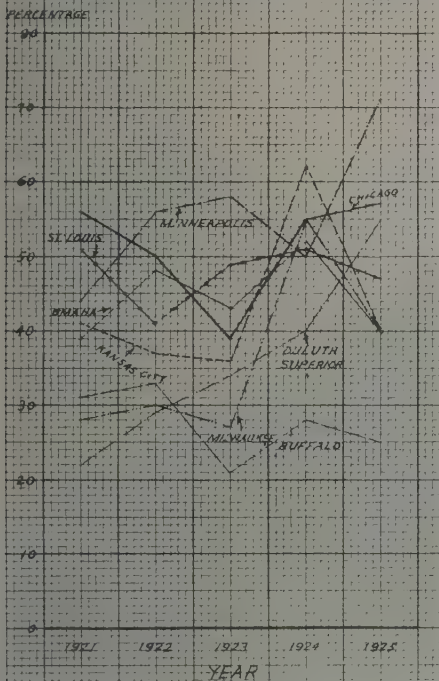
¹The estimated loss of 2,396 country elevators with average capacity of 24,000 bushels would equal 57,504,000 bushels.

cluding public and private elevators and mill storage:

Interior Markets: Minneapolis, 60,456,000a; Indianapolis, 4,615,000a; Des Moines, 1,325,000a; Cedar Rapids, 7,846,000a; Kansas City, 38,683,000a; St. Louis (includes East St. Louis), 12,054,500a; St. Joseph, (Mo.), 3,967,000a; Omaha, 12,140,000a; Cincinnati, 2,856,000a; Ft. Worth, 9,825,000a; Wichita, 7,650,000a; Sioux City, 3,000,000a; Peoria, 3,680,000a; Burlington (Ia.), 600,000a; Davenport (Ia.), 1,090,000a; Oklahoma City, 1,283,000a; Hutchinson (Kan.), 2,710,000a; Salina (Kan.), 2,125,000a; Enid (Okla.), 3,000,000a; Dallas, 1,960,000a; Louisville, 3,570,000a; Nashville, 4,007,000a; Topeka, 760,000a. Total, 189,202,500.

Lake Ports: Chicago, 52,835,000a; Duluth, 21,025,000a; Superior, 19,675,000a; Milwaukee, 6,550,000a; Detroit, 1,285,000b; Erie, 1,270,000a; Fairport, 1,000,000b; Buffalo, 41,465,000a; Cleveland, 3,000,000a.

RATIO OF AVERAGE STOCKS OF GRAIN IN STORAGE TO GRAIN ELEVATOR CAPACITY AT MARKETS 1921-1925



000a; Toledo, 4,500,000a; Oswego, 1,000,000a; Green Bay, 2,000,000a; Manitowoc, 650,000a. Total, 156,255,000.

Seaboard Points: Portland (Me.), 3,000,000c; Boston, 2,437,191d; New York, 8,835,000a; Philadelphia, 3,900,000d; Baltimore, 12,600,000d; Norfolk, 860,000a; Newport News, 1,000,000a; New Orleans, 6,472,000e; Galveston, 5,650,000e; Seattle, 2,300,000f; Tacoma, 2,950,000f; Portland (Ore.), 1,053,000f; Astoria, 1,250,000f; San Francisco, 6,520,000c; Port Arthur (Texas), 500,000d; Houston, 500,000d; Texas City, 500,000e. Total, 59,727,191. Total for the United States, 405,184,691.

a. 1927 reports of these markets furnished by the secretary's office of the Chicago Board of Trade.

b. 1924 Port Series, "Transportation on the Great Lakes."

c. 1923 Port Series, Board of Engineers, War Dept.

d. 1922 Port Series, Board of Engineers, War Dept.

e. 1924 Port Series, Board of Engineers, War Dept.

f. 1925 Port Series, Board of Engineers, War Dept.

Trends in Grain Storage Space: The relative position of the principal grain markets is indicated

by the figures on total space, including mill storage, for eight principal markets since 1910.

GROWTH OF THE GRAIN ELEVATOR SPACE IN PRINCIPAL GRAIN MARKETS, 1910-1926

	1910	1920	Increase per cent	1926	Increase per cent
Buffalo ^b	21,490,000	28,250,000	31.4	39,245,000	39.3
Chicago ^b	50,845,000	55,020,000	8.2	55,030,000 ¹	(1)
Duluth-Superior	32,275,000 ^c	36,325,000 ^a	12.2	40,700,000 ^c	12.0
Kansas City ^d	11,110,000	26,940,000	142.4	37,532,500	39.3
Milwaukee ^e	9,970,000	16,310,000	63.5	12,540,000	23.1 ²
Minneapolis	40,750,000 ^f	56,150,000 ^a	37.7	60,964,000 ^f	8.5
Omaha	6,115,000 ^g	11,100,000 ^a	81.5	11,940,000 ^g	7.5
St. Louis	11,300,000 ^a	9,850,000 ^a	12.8 ²	12,054,500 ^h	22.3

a. Almanacs of Northwestern Miller.

b. Annual Reports Chicago Board of Trade.

c. Duluth Board of Trade Annual Reports.

d. Annual Reports Kansas City Board of Trade.

e. Milwaukee Chamber of Commerce.

f. Minneapolis Chamber of Commerce.

g. Omaha Grain Exchange.

h. St. Louis Merchants Exchange.

i. Weighmaster's List, Chicago Board of Trade.

1. Less than one-tenth of 1 per cent.

2. Loss.

It is apparent that Buffalo, Duluth-Superior, Kansas City, and Minneapolis have made steady gains over this period, while Chicago has made only nominal gains. Omaha has practically doubled in

kets considered are so nearly alike that the negative relationship to space seems the only one which can be indicated. The high average ratios at New Orleans and Philadelphia, as well as the abnormally high ratios at New York and Galveston, reflect the large export movement of grain to Europe in these years.

The extremely wide seasonal spreads, as indicated by the ratios of high and low stocks to capacity, is characteristic of the movement of grain through terminal elevators. Worth noting also is the relatively low average use of space as indicated by the ratios of average stocks to capacity.

In order to determine, if possible, some trend in the use of elevator capacity at the important interior markets, ratios of high, low, and weekly average stocks of the combined grains¹ were determined for 1921-1925 inclusive. These ratios with a five-year average ratio are given in the three-column table below. In determining these ratios, the commercial elevator capacity at each market from which stocks in storage are reported each week as part of the visible supply of grain was

¹ Wheat, corn, oats, rye, and barley.

HIGH, LOW, AND AVERAGE STOCKS OF THE FIVE GRAINS COMBINED, IN TERMS OF RATIOS TO THE RATED ELEVATOR CAPACITY¹ OF EACH MARKET, AT FIFTEEN SPECIFIED TERMINAL POINTS FOR THE TWO-YEAR PERIOD 1919-1920

Market	Elevator capacity	Ratio of high stocks to capacity ² Per cent	Date	Ratio of low stocks to capacity Per cent	Date	Ratio of average stocks to capacity
Interior Points						
Minneapolis	42,775,000	71.8	Feb. 1, 1919...	2.8	Aug. 21, 1920...	36.5
Chicago	42,783,600	72.8	Feb. 22, 1919...	9.2	Jan. 3, 1920...	39.7
Duluth	35,850,000	83.3	Mar. 15, 1919...	1.1	Aug. 28, 1920...	23.9
Buffalo	24,933,000	78.0	Nov. 8, 1919...	4.2	Aug. 21, 1920...	39.8
Kansas City	21,902,000	94.5	Oct. 25, 1919...	6.6	July 5, 1919...	39.6
Omaha	9,085,000	73.3	Oct. 18, 1919...	9.9	July 24, 1920...	38.8
Milwaukee	7,173,000	129.7	Feb. 8, 1919...	8.4	Aug. 21, 1920...	49.3
St. Louis	5,355,000	72.2	Sept. 6, 1919...	7.7	May 31, 1919...	32.9
Peoria	2,130,000	30.5	Sept. 25, 1920...	1.7	May 24, 1919...	16.2
Indianapolis	945,000	222.4	Nov. 6, 1920...	42.0	July 3, 1920...	99.0
Seaboard Points						
Baltimore	9,752,000	53.8	Sept. 11, 1920...	10.7	Jan. 10, 1920...	38.5
New Orleans	7,572,000	84.9	Nov. 8, 1919...	27.1	May 15, 1920...	53.9
New York	6,732,000 ³	151.1	Mar. 29, 1919...	9.7	May 8, 1920...	76.9
Philadelphia	4,250,000	83.6	June 19, 1920...	18.1	Jan. 24, 1920...	52.9
Galveston	3,100,000	156.2	May 29, 1920...	13.3	Jan. 24, 1920...	52.9

space, while Milwaukee and St. Louis show an uneven trend. Gains are most marked in the decade 1910-1920. Buffalo and Kansas City continue to gain in the period 1920-1926.

TRENDS IN THE USE OF STORAGE SPACE

Additional light is thrown upon the ranking of markets as storage centers if the utilization as well as the amount of space is taken into consideration. This use of space is best indicated by a ratio of stocks of grain in storage throughout the year to the elevator capacity at the market. Ratios of the high, low, and average stocks of the five principal grains combined were determined for the important interior markets and seaboard points for the 1919 and 1920 period by the Federal Trade Commission in its report on the grain trade in 1921. The results are given in the following table:

Leaving out of consideration those markets in which the data on stocks are admittedly faulty, it is evident on the basis of the average ratios that there is little correspondence between amount of storage space and the use of this space. The Chicago market offers the only exception. However, the ratios of average stocks of all the interior mar-

¹ Excluding the elevator capacity of millers, converters, etc.

² The stocks at Milwaukee, St. Louis, Indianapolis, New York, and Galveston were overstated, in that stocks not in commercial elevators were included. At present there seems to be no data available for adjusting the figures. The ratios of stocks to capacity are therefore maximum figures.

³ Warehouse capacity of 570 tons not considered. Report of the Federal Trade Commission on the Grain Trade, Vol. III, p. 277.

used. Mill elevator space was not included because storage stocks held in such elevators are not reported as part of the visible supply of grain at the market. Stocks of grain in storage are the same as those reported weekly for the various markets by the *Chicago Daily Trade Bulletin*.

Indications of trend in use of space, so far as they are shown by the ratios of the five-year period, point to a slight decline in the use of Buffalo as a storage point. The ratio of high stocks at Buffalo declines markedly, that of the low stocks is steady, while the ratios of average stocks are consistently low. In arriving at conclusions about Buffalo as a storage center, it must be remembered that during the winter considerable amounts of grain are held in boats in the harbor without unloading. Such grain is reported as "grain afloat"

RATIOS OF HIGH, LOW, AND AVERAGE STOCKS OF GRAIN¹ IN STORAGE TO GRAIN ELEVATOR CAPACITY² AT CERTAIN MARKETS, 1921-25

1921				1922				1923				1924				1925				Average 5 Years		
Date	High	Date	Low Aver- age	Date	High	Date	Low Aver- age	Date	High	Date	Low Aver- age	Date	High	Date	Low Aver- age	Date	High	Date	Low Aver- age	High	Low Aver- age	
Buffalo	Oct. 8	59	Apr. 16	14	31	June 10	49	Apr. 29	16	33	Oct. 3	35	May 5	8	21	May 31	40	Aug. 16	14	28	Feb. 28	37
Chicago	Oct. 22	71	May 21	35	56	Mar. 18	70	Dec. 2	27	50	Dec. 29	52	July 21	9	39	Oct. 15	84	July 19	28	55	Jan. 24	37
Duluth-Superior	Sept. 24	87	Jan. 22	12	22	Apr. 22	63	Aug. 5	7	29	May 5	68	July 11	11	34	Oct. 8	63	Aug. 23	4	40	Apr. 18	33
Kansas City ..	Oct. 15	74	Jun. 25	17	41	Mar. 4	68	Nov. 25	20	37	Dec. 29	69	July 21	11	36	Oct. 1	91	July 5	25	62	Jan. 8	32
Milwaukee	Oct. 22	58	May 28	9	28	Mar. 25	74	Oct. 14	10	30	Dec. 29	48	July 21	6	27	Oct. 29	81	July 19	13	55	Feb. 14	84
Minneapolis ..	Dec. 31	79	Jun. 4	23	44	Jan. 7	78	Aug. 12	38	56	Dec. 29	70	Aug. 18	33	58	Dec. 27	92	Aug. 23	23	50	Feb. 14	94
St. Louis ¹	Oct. 15	82	May 14	13	51	Mar. 4	73	July 8	18	41	Mar. 3	110 ⁴	July 7	7	49	Sept. 27	84	July 19	18	51	Feb. 7	73
Omaha	Oct. 15	62	May 28	18	39	Mar. 18	74	July 29	28	48	Dec. 29	67	July 21	17	43	Oct. 15	82	July 26	23	52	Dec. 26	64
Average of all markets....		65		18	39		69		20	41		65		13	38		77		18	49		75
																					13	47
																					70	17
																						43

1. Includes East St. Louis.

2. Wheat, corn, oats, rye, barley.

3. Excludes elevators of millers and converters.

4. Probably to be accounted for by the reporting of stocks not in commercial elevators.

and does not get into the report of elevator storage stocks. Grain also moves so rapidly through the elevators that much of it passes through without being caught by a weekly stocks-in-storage report.

The use of space at Chicago tends to remain constant over the period. Increasingly high stocks are carried, while low stocks fluctuate sharply. The average use of space at Duluth improves consistently over the period. This gain is reflected in the increasingly high stocks carried. Use of space at Kansas City remains fairly constant though there is some evidence of gain. Low stocks fluctuate widely.

At Milwaukee the average use of space shows a low ratio until 1924 and 1925 when a marked improvement is apparent. Minneapolis shows tendencies to gain in average use of space similar to Duluth, only not so marked. A slight tendency to gain is evident at St. Louis. Omaha shows wide fluctuation in use of space from year to year but the trend is up.

The seasonal movement of storage stocks at the several markets is indicated by the dates of the ratios of high and low stocks. In this seasonal movement, Chicago, Kansas City, Milwaukee and Omaha closely resemble each other for the five-year period. The time when stocks are low at Buffalo coincides roughly with the date of high stocks at Duluth-Superior. In other respects these markets stand apart from the rest. Minneapolis conforms to the seasonal movement of Chicago, Kansas City, and Omaha except for the years 1921 and 1922. The same may be said for St. Louis.

From year to year there is little uniformity for the same market in the date of the high and low ratios. The following exceptions are noted. Except for 1921, the low stocks at Duluth came in July and August. Except for 1922, the low stocks at Kansas City came in July. Minneapolis shows the greatest uniformity from year to year. The high stocks came in December and January, except for 1925. The low came in August except for 1921. The low stocks at St. Louis, except for 1921, came in July and August. The low stocks at Omaha, except for 1921, came in July. For a given market there is much more uniformity from year to year in the date when stocks were low than when they were high.

Within a single year there is considerable uniformity at the different markets in the time at which the high ratio of stocks is reached. In 1921 all markets reach the high ratio in October except Duluth (September 24), and Minneapolis (December 31). In 1922 all markets except Buffalo and Minneapolis reach a high ratio in March or April. In 1923, five markets reach a high ratio in December; in 1924, five markets reach a high ratio in October. In 1925 six markets reach a high ratio in January or February.

There is practical uniformity in the date of low stocks in all markets for 1923-4-5, the low point being reached in July or August, with the exception of Buffalo in 1923 (May); 1925, (September); and Chicago 1925 (September).

The amount of seasonal fluctuation in the handling of storage stocks is indicated by the difference between the high and low ratios. Giving the five year average fluctuations of all the markets the value of 100, the ranking of the individual markets for season fluctuations in amount of storage stocks is as follows: St. Louis, 120, Milwaukee 115, Kansas City 109, Duluth-Superior 100, Minneapolis 100, Chicago 96, Omaha 96, Buffalo 60.

(To be concluded)

GULF EXPORTS

By W. D. HORNADAY

Exports of corn through Galveston, Texas, this season to November 1 amounted to 13,220,120 bushels, an increase of 1,600,000 bushels over the previous season. From Houston exports were 774,715 bushels, a decrease of about 450,000 bushels under the previous year. Port Arthur exports totaled 533,423 bushels. Stocks of grain in elevators at Galveston amounted to 2,761,000 bushels.

It was stated by R. C. Andrews, district manager

of the car service division of the American Railway Association for this district, that between 20,000,000 and 25,000,000 bushels of corn have been sold for export through Gulf ports. Mr. Andrews pointed out that on November 1 there were only 391 cars of all grain on track here, of which 161 were placed for unloading. There is now sufficient space in elevators for 900 cars, while grain bookings are good. "It will readily be seen, therefore, that car accumulations at Galveston are extremely low and the situation offers no cause for anxiety," he said.

FIRE DESTROYS INDIANAPOLIS ELEVATOR

The Indianapolis Public Elevator at South Sherman Drive and the Big Four Railroad was practically destroyed by fire Saturday, November 3. The fire of unknown origin was discovered shortly after noon in the working house which was a mass of twisted metal two hours later.

The structure was built just before the great war by Horace Kinney of the Kinney Grain Company, and before its completion Le Roy Urmston of the Urmston Grain Company became a partner of Mr. Kinney. For some time it was known as the Big Four Elevator and was taken over by the Urmston



INDIANAPOLIS PUBLIC ELEVATOR IN FLAMES

Grain Company, who had purchased the Kinney interests, and was operated by that company until their failure. After the failure of the Urmston Grain Company the J. F. Wild Bank of Indianapolis took possession of the property, and spent a goodly sum of money on improvements, after which the elevator was operated by the National Elevator Company. When the banking house of J. F. Wild Company closed their doors, the receivers for that institution advertised the property for sale, and it was bought by the Nashville Warehouse & Elevator Corporation of Nashville, Tenn. The company had made some extensive improvements and spent a large sum of money for new equipment in the head house.

The loss is estimated at \$400,000, made by Marvin Scales, manager of the elevator. There were 400,000 bushels of grain in the elevator at the time of the fire, much of which has been damaged by the fire. Workmen tried in vain to extinguish the flames which gained headway rapidly. The Beech Grove fire apparatus was called but when it arrived the fire was beyond control. Eight pieces of apparatus from Indianapolis came to the rescue but being out of the city limits with little water supply and pressure, little was accomplished.

About 355,000 bushels of grain was stored in the concrete tanks, which were heated to a high degree by leaping flames and fire in the top gallery.

Just how much damage has been done to the grain in the concrete storage tanks, can not be estimated at present, and necessary measures will be taken to have it removed as soon as possible. The removal without a working house will be done by hand, and it is feared that much of the grain will be in bad condition as rotting will be inevitable. Storage in the tanks consisted of 197,500 bushels of oats, 155,000 bushels of wheat and 1,600 bushels of corn and some other grains. The elevator was bonded by the Federal Government, Scales said, and a Government auditor had checked the company's books Friday.

WHEAT FROM THREE STATES BANNED BY MEXICO

Wheat from Illinois, Kansas, and Missouri has been placed under quarantine by the Mexican Government, and its importation into Mexico prohibited. Bread grain from other states may be imported only if accompanied by a fumigation certificate properly red-taped by Mexican consular officials.

An alleged flag smut plague in the three states named is the reason given by Mexican officials for this action. First reports of the quarantine stated

that the prohibition would be effective November 20, but on November 2, the Department of Commerce was advised that the order already had been in effect for three days.

CO-OP BUSINESS DECLINES

Farmers' co-operative associations suffered a decline of \$100,000,000 in trading volume during the 1927 season as compared to the volume recorded in 1925. Further figures from the Department of Agriculture's Division of Co-operative Marketing show that the decline took place in spite of the fact that the number of associations increased from 10,083 in 1925 to 11,400 in 1927.

The excuse offered for the decline by the Government bureau whose job it is to chaperone co-operatives, is that "the price level for 1927 is lower than that for 1925." Co-op grain firms are credited with trades totalling \$680,000,000 last year.

CANADIAN inspections indicate a material increase in the crop of Durum wheat. Inspections of Durum to October 22 amount to about 13,000,000 bushels as compared with only 6,500,000 last year, which was about 50 per cent of the total for the year. Making some allowance for the early harvest, the Durum inspections for the season may be estimated at about 25,000,000 bushels.

Michigan Dealer Has Variety of Sidelines

White Bros. Feature Both Small and Large Sidelines in Their Business at Scotts and Kalamazoo, Mich.

FOR VARIETY in sidelines handled, few concerns can rival the White Bros., whose main office is at Scotts, Mich. Not only does the concern do a vast amount of business in hay, grain, feeds and seeds, but numerous other commodities are handled and branch establishments are maintained to extend the territory served. Coal and tile have both been found to be profitable sidelines, but these are only a few of the lines featured.

The plant is located on two streams, as well as having direct track connection with the G. T. W. The brothers who own the business have an excellent motor car business too, and supply the necessary fuel for such conveyances. Since the inception of the co-partnership, in 1896, William E. and Harley R. White have been uniformly successful. During the last year it has been necessary to add to the modern elevator at Scotts, which is a fire resistant structure.

The elevator is of wood and tile construction, and is divided into eight bins. The storage capacity is 15,000 bushels, and the shipping and receiving capacities are each 3,000 bushels, as is also the cleaning capacity. The cleaning units include a Monitor, an Invincible, and two other machines. Electricity is the means used for motive power and there are three motors, the principal units of which were furnished by Fairbanks, Morse & Co. There is automatic control, and belts are used for the drives. Fairbanks Scales are used.

The principal grains handled are wheat, oats and rye, the first named being the one of which the greatest quantity is merchandised. During the

edge; other particles of a different weight go to some other discharge point.

When a mixture of seed differing in weight is fed to the separator deck, it is propelled across its surface by the motion of the deck and each class of seed which may be contained in the mixture forms a zone of separated seed of like nature. These zones report at the delivery edge of the deck and may be cut or divided, by the cutting fingers provided for that purpose, into separate receptacles.

The accuracy of this method of separation is surprisingly high. Work can be done and separations secured which cannot be done or obtained on any other type of machine, according to the owners. For this reason the work of these units is also surprisingly high, higher than any other type of seed cleaning device.

When the stock requires grading only, the whole of the feed forms into one mass on the deck of the machine, the heavier seed reporting at the upper discharge edge of the deck and the lighter, worthless or infertile seed, at the extreme opposite edge. It is then possible to cut any desired grade of product in fertility, within the limits of the stock being handled.

More machinery was installed last spring, along with a new electric motor. Since the utility com-

seed and bean warehouse, makes the company's equipment complete and up-to-date.

The new garage and sales room at 846 Portage Street, in Kalamazoo, is one story in height and covers a ground area of 55 feet frontage on Portage Street with a depth of 166 feet. Its cost was approximately \$40,000, and covers only a portion of the real estate available. This property is to be further developed in the next two years, if the plans now contemplated by White Bros. are carried out. The front is of cream brick, with Indiana limestone trimmings. There are heavy plate glass windows on the west and south frontages, roof trusses and supports are of steel, as are all doors and window frames and casings. The only wood used in the structure is the interior trim—of quarter-sawn white oak. Ten cars can be shown to good advantage at one time in the display room.

A small basement was provided for the heating plant, which includes a smokeless boiler with fan ventilating system attached. This is all in line with the steady growth of the organization, and progress in recent years has been such that White Bros. have felt justified in making their plans provide for further development in the future.

The father of the present brothers who conduct the business, William J. White, learned the baking



STORE HOUSES BELONGING TO WHITE BROS.



WHITE BROS.' GARAGE AT SCOTTS, MICH.

pany had come in with their new 60-cycle, alternating current, high voltage line, White Bros. changed all their line to make it completely electric. At that time tests were made to show the excellent grade of work the plant was doing. A sample of buckhorn mixed with Clover seed, as it came from the grower, and another sample of this seed when it was ready for market, showed a Michigan State analysis of this seed as 99.43, with a germination of 96.5 per cent.

"In a smaller way," wrote Mr. White, "we have specialized in the past few years in home grown Growers' certified June and Mammoth Clover seed, for we are thoroughly convinced of the value of strictly high grade home grown Clover seed, all from one grower, thoroughly acclimated and adapted to this colder climate—that it has a much greater value than where many lots from many states are blended, for being adapted to the rigors of the colder climate, it will produce a much better crop. Winter wheat has been marketed slowly by the Growers, only about as fast as could be used by the White's flouring 'Eureka Mills.'"

At about that same time, Eureka Mills installed another large packer and a complete pancake flour system. This, together with the other improvements which had been added since the new electric motors were installed as auxiliary power for the winter power, made the flour unit an excellently equipped plant. "Business is much different from what it used to be," said Mr. White, "for where one or two trips a week with the truck used to take care of a surplus, now one or more trucks are going steadily."

The new foundation under the Scotts Elevator was completed last summer, and a complete new Fairbanks, locomotive style, automobile type, heavy duty scale was added, with registering beam. This, together with the new potato storage and

trade in England, and for a great many years he was in charge of the Albion Stone Mill, manufacturers of the well known "Albion" patent flour. Somewhere along in the seventies he purchased the Eureka Mills, at Scotts, Mich., and later, as an added income was necessary, the various members of his family branched out into the country elevator business. As time went along, a very satisfactory trade was established by them in southwestern Michigan.

The general office of White Bros. is now at Scotts, Kalamazoo County, Mich. A branch office is maintained in Kalamazoo and there is also a used car lot in that city. There are also a Vicksburg sales room and a Dowagiac sales room. In addition to the general trade in grain, hay and feeds, the concern handles coal and coke, auto truck scales, drain tile, salt, coal unloaders, dairy Alfalfa, packing hay motor cars and trucks.

NEW HEAD FOR NORWEGIAN GRAIN MONOPOLY

The grain monopoly in Norway, which is expected to begin next July, is to be under the direction of Oskar Jahnsen, president of the Norwegian Grain & Flour Importers Association. He will bear the title of government food administrator and takes office December 1, 1928. Until July he will be engaged in perfecting his organization.

The first grain monopoly in Norway was established in August 1914 as a war measure under the Norwegian Government Food Commission. This was dissolved by an order-in-council in September 1916 and the activities transferred to the government directorate which was formed then, merely an administrative change. During 1917 an import monopoly on grain and flour was established. The monopoly continued until 1927 when it was withdrawn by the Norwegian legislative body, the Storting.

When the Storting met in June it was composed largely of members of the Liberal and Labor Parties and it voted on June 18, 1928, to reinstate the monopoly.



NEW ELEVATOR OF WHITE BROS., SCOTTS, MICH.

course of the year approximately 60,000 bushels go through the house. Howard Roe is superintendent of the elevator.

During the past season a frost proof addition to the Scotts Elevator was completed, with extra storage floors. As it developed, after the plans were completed, that there was a large acreage of very choice home grown medium and Mammoth Clover seed harvested in the territory, it was decided that a complete seed and bean cleaning system should be installed. This included a clipper outfit, a No. 6 unit provided by Huntley Manufacturing Company, Brocton, N. Y., a separator, a polishing outfit, a buckhorn remover and all that was necessary to make one of the best equipped small seed plants in southern Michigan.

A special specific quantity machine for cleaning out seeds that could not be removed by the usual methods was needed, for Michigan Clover seed now runs to a mixture of sorrel and buckhorn seed, which require a special process for removal. Specific gravity separation differs from other methods in that the unit on which the work is done is not a suction or blowing machine or a fanning and screening mill. The work is done by accurately weighing the particles of a mass, or the seed of a mixture, on a thin film of air, under pressure, each particle or seed being accurately weighed while traveling en masse with its fellows. The mixture is propelled across the separator deck surface and the particles of the same, or similar, weight come together at one delivery point of the deck discharge

Wheat and the Texas Panhandle

What the Lone Star State and the "Wheat Capital" at Amarillo Mean to the Nation's Grain Trade

By WILLIAM B. BURNS

TEXAS is a great state, great in area, great in population, great in resources. There are also some great people in Texas. Across this empire of the largest of the states from east to west, commencing at Shreveport, La., and running to El Paso, is a railroad 800 miles long. And from Brownsville, in the southeastern extreme, to Texline in the extreme northwest is a distance of more than 800 miles.

Texas is too large to attempt to portray even in a sketchy way, in one article. It has over 4,000,000 people. Suppose we confine ourselves to what is called the Panhandle of Texas, bounded on the north by Oklahoma, on the east by Oklahoma and the main body of Texas, on the south by Texas and on the west by New Mexico. The Panhandle proper contains 30 counties and is 150 miles by 175 miles in area.

The Canadian River flows from its source, the foothills of the Rockies, across the northern portion and the Red River from the same source flows east-

of it is grazing land. Some places the rugged contour and rocky soil make wheat growing impossible. Some of the land is 'thin.' Over in the southwestern corner is sandy soil. But estimating the possible acreage from close observation and study of every county in the Panhandle, I would say the Panhandle can produce 40,000,000 bushels of wheat and still have room for cattle, sheep and other products of farming." Why wheat may be grown so successfully on these western plains, which were termed deserts not long ago, is hard to explain. The average precipitation in the Panhandle country has been 22 inches per annum, while in the sister state, New Mexico, it is only 11 inches.

The Panhandle of Texas is in line, looking to the north, with North Platte, Neb.; with the arid belt of western South Dakota; with the wheat lands of western North Dakota and with the eastern province of Canada, Manitoba. It is the most southerly of any section of North America where Hard Winter milling wheat can be grown success-

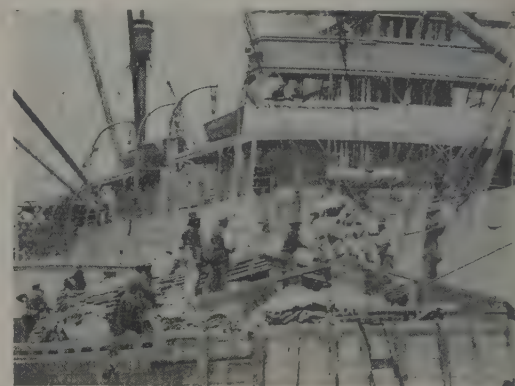
bakery production has assumed greater importance. Let us also recall the remarkable increased production and consumption of dairy products where wheat raising was once profitable in what was once termed the corn and wheat belt of the United States. As industrial centers grow, dairy products must be supplied from the immediate vicinity. Automobiles, trucks and improved highways are facilities not only for collecting these dairy products, but also for distributing them from these industrial centers. All of this tends to a decreased production of wheat in eastern states.

There is one more factor of importance and, as in many things, the last is best. This is the increased use of tractors, combines, and other forms of modern farming. By these means the immense country west of the one-hundredth meridian, leading from Winnipeg to Galveston, is bound to become the area where wheat will be raised in increased quantities.

One man named W. P. Campbell, at Hardin, Mont., raised 800,000 bushels of wheat on 40,000 acres in 1897. One man near Satanta, Kan., has had 20,000 acres of wheat for the past six years and it is reported that he has missed but one crop out of that time. It is said that there is not an animal or fowl of any kind on the place. There is, in the way of farming equipment, nothing but machinery and a few buildings to protect them. How can the Middle West farmer with high priced land compete with this kind of mass production?

PRESIDENT ISSUES CORN TARIFF STATEMENT

The so-called flexible provision of the Tariff Act of 1922 does not give the President of the United States authority to increase customs duties so that injustice would be done foreign countries, it was stated officially at the White House executive office this month. The authority of the President, it was explained, is limited to alterations in the tariff rates for the purpose of equalizing the cost of pro-



UNLOADING ARGENTINE CORN IN NEW YORK HARBOR

duction in the United States and abroad and then only after a fact-finding investigation.

The explanation was made as the result of the recent protest of Argentina over the suggestion that an increase in the duty on corn would be authorized following the cost of investigation now being made by the Tariff Commission. On September 26, the Argentine Ambassador in Washington, Manuel Malbran, delivered a note to the Department of State stating that the proposed increase in the duties on corn had caused the Argentine Government "grave concern."

The views of President Coolidge on the matter are given officially as follows:

"Mr. Coolidge does not know what the findings of the United States Tariff Commission may be in regard to the tariff on imports into this country of corn and flaxseed. He understands that the Commission could of course find what would be the difference in costs of production in the United States and production in a competing country. All the President would be authorized under the law to do would be to either increase or decrease the tariff in order to balance up that difference.

"That would mean that any foreign competing



PLANT OF HARVEST QUEEN MILL & ELEVATOR COMPANY, AT PLAINVIEW, TEXAS, WHICH WITH FOUR ELEVATORS, HAS A TOTAL CAPACITY OF 538,000 BUSHELS

ward and both of them, of course, have many tributary streams.

Not many years ago buffalo and Indians were the principal inhabitants. Then followed the cattlemen and the sheep men and the wild country became more civilized. Railroads followed in due course. More fully to grasp this development look at the map. While the Panhandle of Texas is sparsely settled compared to other western states; we find that Amarillo, its principal city, has a population of 52,600; and that Lubbock, Plainview, Dalhart, Canadian, Pampa and Childress are thriving, progressing towns of commercial importance.

The Panhandle of Texas has had its oil boom which has subsided, although some wells are still making satisfactory incomes. Amarillo was called an "oil town," as were many other cities which gained impetus from that ebullient gold, oil. But now Amarillo has its skyscrapers, modern hotels and jobbing houses. It is a crossroads of a small empire of wheat. Of what will this empire consist in the future?

Amarillo is and will be the wheat capital of this small empire of wheat acreage, which, quoting Walter Barlow, manager of the Great West Mill & Elevator Company, one of a group of flour mills controlled by Frank Kell, of Wichita Falls, Texas, has already produced 22,000,000 bushels of wheat on 1,300,000 acres.

"What do you think the possible acreage and production of wheat will be in the Panhandle?" Mr. Barlow was asked. His answer in substance follows:

"Not all of the Panhandle is wheat land. Much

fully. The Panhandle country comprises nearly all the area in Texas where wheat of any consequence can be raised.

The railroads have recognized the possibilities of revenue-producing freight. The small railroad of which Frank Kell was president has constructed a new line into Pampa, going from Clinton, Okla., connecting with the end of the line now being operated from Clinton. It was sold to the Santa Fe last July. The Rock Island is contemplating building a line from Liberal, Kan., to Amarillo, giving faster service on all freight into the Panhandle and from there.

There are only two flour mills of importance in this territory, which has produced over 20,000,000 bushels of wheat and may produce 40,000,000. They are located at Amarillo and Plainview and both are new, having been built in 1921 and 1922. There is a small Midget Mill at Abernathy which is operated by the Abernathy Milling Company, and another mill at Chillicothe. At every railroad station in the counties raising wheat are elevators.

It is the history of civilization which is only being repeated. First the aborigines, then the early settlers with their cattle and sheep ranges, the wheat growers, coincident with the building of railroads to haul the wheat to markets, extension of railroad buildings, based on the production of wheat as its important industry. Flour milling naturally follows.

For 25 years the tendency in wheat raising, flour milling and bread baking has been toward the decrease of household production of bread and the

country would be put on a basis of equality with the United States. If, for instance, it costs \$1 to produce a bushel of corn in the United States and 90 cents to produce a bushel in a foreign country, the President would have the right under the tariff law to increase the present tariff not more than 50 per cent in order to make up any discrepancy. The President could not, however, under the law take any action that would be unfair and unjust to any foreign country."

THE ARGUMENT FOR A CORN TARIFF CHANGE

Arguments made to the Tariff Commission, urging an increase in the import duty on corn, rests on established facts. It is fortuitous merely that at present the imported corn comes from Argentina. It might well be that the commodity could come from any other region capable of producing the grain.

Corn grown in the valley of La Plate River is put on board ship at Rosario, hauled more than half way around the world from north to south, and sold on the Pacific coast at a price that shuts the corn produced in Nebraska out of its natural market.

Difference in cost of production has something to do with this situation. Mainly the trouble is in the cost of carriage. Freight rates from the Missouri Valley to the Pacific Coast are higher than from the fields of Argentina. Water carriage accounts for this state of affairs.

All the Middle West, the greatest corn-producing region in the world, is affected by the condition.

Contention that 75 per cent of the corn raised in the United States is consumed near where it is grown will not sustain an argument against the protection asked. The 25 per cent that is shipped amounts to well over 600,000,000 bushels annually and is a great factor in the farmers' economic problem.

If it be discrimination, as alleged by the representative of Argentina, the fact may as well be frankly admitted. Such discrimination is well within the rights of the American nation, for the protection of the welfare of its own citizens. Our tariff laws do not single out any particular country, but apply equally to all. Our commercial treaties contain the "most favored nation" clause, which means all fare alike.

Tariff on corn is fixed at 15 cents a bushel. The request now preferred is that this rate be increased 50 per cent, making the rate 22½ cents per bushel. Such a rate will protect American producers in the home market. It will materially reduce the economic disadvantage of the farmer. Justice to agriculture requires that this protection be given.—*Omaha Bee-News.*

BARLEY LAB. FOR CANADA

A barley research laboratory is to be established at the Manitoba Agricultural College. For several years Professors Grant and Harrison at the college have been conducting investigations of barley in both the production and marketing fields. Statistics show that although Canada is now the largest exporter of barley in the world, grades of the grain are poor and bring a low price.

The principal aim of the laboratory, of course, will be to raise the quality of Canadian barley.

PREDICTS CORN PRICE RISE

Farmers and dealers who have corn on hand this year should be encouraged by the recent improvements in market prospects for the new crop. The downward revision in the estimate of the Rumanian crop indicates that the corn crop of Europe this year will be about 23 per cent less than it was last year. This, together with comparatively high prices for Argentine corn, according to W. M. Jardine, Secretary of Agriculture, should increase export demand for our corn, at least until the new Argentine crop is available. There was a very small carryover of old corn in the United States

this year and the new crop is estimated to be less than 5 per cent greater than last year's.

Total supplies of corn available this year are estimated to be about 2,967 million bushels as compared with 2,909 million last year. Although the domestic situation as regards the size of the corn crop, the stocks of old corn, and the corn hog cycle is very much the same as in 1925, it is recognized that we have a very different foreign situation and that cattle are now much higher than they were three years ago. This indicates that corn prices should not fall as low this year as they did in 1925-26.

A MODERN DAKOTA ELEVATOR

It was remarked in a magazine article not very long ago that the most distinctive type of architecture developed in the Middle West was that of the modern grain elevator, and there can be little doubt that the commercial necessity has in this instance been mother to a decided innovation in type of buildings. The elevator of the country station serves to cement the relation between interstate commerce and the farmer, and its utilitarian purpose can be served at the same time that a structure of some desirable appearance is created. What it lacks in art, it makes up in solidity and substantiality. The tendency today is to construct houses, which while they will be erected at a minimum cost, will still have a long period of life

structure is the grinder shed and this attached unit measures 25 feet by 34 feet. The building is two floors in height. The inside finish is cribbing, and every possible means has been used to make the elevator fire resistant. Chemical receptacles have been provided at strategic points and great care has been taken to protect the company against fire in the future.

The grain storage capacity is 20,000 bushels, in the 24 by 25-foot unit; and in addition to this storage space there is adequate room to house five carloads of merchandise in the adjacent 25 by 34-foot building. A Jay-Bee No. 5 Feed Grinder has been provided by J. B. Sedberry, Inc., Utica, N. Y.; and there is a two-ton feed mixer. A five-bushel automatic scale and two hand scales, one of the Fairbanks type, make up the rest of the major equipment. In addition, there is an air dump, a cleaner, and necessary electrical devices.

Central station service supplies the needed current, and there are four three-phase motors. A one-ton motor truck serves the house, traveling an average distance of 50 miles per day.

TO STABILIZE MARKET AND RAISE MONEY

In order to stabilize the wheat market and to meet expenses of the Government in its program of aiding its wheat producers, the Spanish government has levied a surcharge of seven gold pesetas



HIRSCH GRAIN COMPANY ELEVATOR, TRIPP, S. D.

with the smallest depreciation possible. Modern elevators show the trend.

One such house is that of the Hirsch Grain Company, in Tripp, S. D. It is situated adjacent to the right of way of the Chicago, Milwaukee & St. Paul Railroad, and has excellent transportation facilities. It not only has up-to-date mechanical features, but has a neat appearance and has been made as nearly free from the usual hazards, such as fire, as modern engineering methods can make such a building.

This concern was organized as the Hirsch Grain Company in 1921, with the South Dakota Grain Company and R. T. Hirsch as owners. The interest of the South Dakota Grain Company was bought out by Mr. Hirsch in 1927, so that the sole owner of the concern at the present writing is R. T. Hirsch. On June 26, 1928, the elevator of the company was lost by fire; but not in the least daunted by this unfortunate denouement, the owner promptly set about perfecting plans for rebuilding the house and improving it over the original one. The result was that when the new building had been completed, Mr. Hirsch had the satisfaction of knowing that his was one of the finest plants for handling grain in the State of South Dakota; and the Texaco Service Station is being operated in conjunction with it.

The new building is of frame construction with steel veneer, and the main unit measures 25 feet in length and 24 feet in width. Adjacent to this

per 100 kilos. This surcharge may be suppressed at any time and is not to be collected on shipments awaiting clearance or which have already left their point of origin with a consular visa of a date prior to the publication of this decree.

JARDINE TALKS ON THE CORN SITUATION

Feeding surplus corn to farm animals rather than overloading local elevators with this crop is the solution offered from Washington this month on how best to utilize the corn crop, the question now confronting farmers and stockmen. In discussing the 1928 corn crop, which is expected to be about 2,931,000,000 bushels, Secretary of Agriculture Jardine points out that this bumper yield, if actually obtained, will be nearly 6 per cent above that for last year which in turn was very close to the average of the preceding five years.

"Normally about 85 per cent of the corn crop is fed to domestic animals" he stated, "but it is often advisable to vary the proportion, thereby preventing undue disturbance of either corn or livestock prices. In the economic machinery of agriculture," Mr. Jardine continued, "the utilization of surplus crops by livestock can be made to act as a governor in maintaining smooth operation." Although the details must necessarily be determined in the light of local practices and conditions, a discussion of the general principles is timely.



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This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

Official Paper of the Grain Dealers National Association and of the Illinois Grain Dealers Association

CHICAGO, ILL., NOVEMBER 15, 1928

WHAT OF IT?

THE relation of price fluctuations to speculation in grain futures is shown in the recently completed study of major transactions in the 1926 December wheat future, released to a waiting world on October 26, by the Department of Agriculture. This is supposed to add greatly to the human store of knowledge concerning the past of this two-year old future, but what we are interested in is the future of the future.

The whole situation reflected by the publication of this study boils down to this: Evidence shows that heavy trading in futures by a few leading grain speculators is frequently an important factor in grain price fluctuations, and the Department of Agriculture doesn't think that is very nice.

Well, as is often said of bureau ideas, what of it? There is nothing of bombshell calibre about either the evidence, or the conclusions drawn from the evidence. No one, as far as we have heard, ever has defended future trading as ideal or as a feature without which the millenium could not be effected. Many, however, have made bold to say that "it works," or that "its good points overbalance its defects."

We do not assume that the Grain Futures Administration, or the Department of Agriculture wants future trading abolished. Their field representatives give many hedging sermons in the course of a year. We do assume that official antipathy, to speculation is a little too much of an obsession. Some limit should of course be put upon the volume of long or short

lines accumulated for any individual. But Governmental chaperones will never be able to control the weather and thereby make grain a non-speculative commodity.

The future of future trading, in view of the wide powers given the Grain Futures Administration, depends upon the ability of the chaperones to be temperate in limiting the active trading essential to a healthy futures market.

BLANK CARTRIDGE

WOULD you buy a page ad in a newspaper and not even print your name on it? That is equivalent to the policy of hundreds of managers who allow their elevators to stand year in and year out without so much as the firm name or a single word of advertising on them.

The extravagance of such a policy is frequently emphasized by the placement of rent-bringing billboards by some outdoor advertising company alongside properties on which rise, like modest violets, blank-wall elevators. A blank wall, so far as advertising goes, is worse than a blank cartridge; it does not even make a noise.

The type of mind which thinks expense for circulars, letters, magazine space, newspaper ads, and trick souvenirs is justifiable, and then passes up free space often is the same type which is open to worry about competition.

Elevator signs need not be elaborate. The simpler and more concise they are, the better. Once the wording is decided upon, the expense is negligible. All elevators, whatever the material, should be painted for weather protection, and to have part of the paint applied in the form of blocked letters will put no firm in bankruptcy.

Utilize that space.

Charity begins at home, and so does advertising.

SEABOARD CORN

PROSPECT for a greater export demand for American corn that has been heretofore foreseen is indicated by the recent downward revision in the estimate of the Rumanian corn crop. The boy-ruled kingdom is the key to the whole European corn demand, and the corn estimate for Rumania now has been trimmed to a scant 100,000,000 bushels. The average for the last five years is 170,000,000 bushels, says the Department of Commerce.

Consequently, although Rumania is ordinarily an important source from which Western Europe obtains corn, there probably will be no corn and little feed grains of any kind available from Rumania this year unless wheat is fed rather extensively as a substitute.

The total estimated corn production of the eight European countries for which information is available is 342,000,000 bushels this year as against 438,000,000 bushels last year. The corn production of these eight countries last year comprised 90 per cent of the estimated total European production (exclusive of Russia) and consequently includes a large enough part of Europe's corn growing regions to indicate a drastic reduction of the corn crop from that of 1927.

Furthermore, the estimated production of the

eight countries for 1928 is now smaller than it has been in any one of the past eight years. These are the fact-magnets which already are pulling corn reserves eastward and to the Gulf.

CORN IN THE WHEAT STATE

THE November estimate places this year's Kansas corn yield at 27 bushels per acre on 6,723,000 acres for a production of 181,521,000 bushels. This is about 148,000 bushels more than was indicated by the October outlook when the probable production was forecast at 181,373,000 bushels. Last year's crop was estimated at 30 bushels per acre for a crop of 176,910,000. The average acre yield for the last 10 years in Kansas has been 17.4 bushels and the average corn production for the five years, 1922-1926, was 104,446,000 bushels. This year makes the lucky thirteenth Kansas corn crop in all her history that has exceeded 170,000,000 bushels.

This is the second Kansas corn crop in succession that has ranked high both in point of total production and in high merchantable quality. Correspondents of the Kansas Department of Agriculture indicate that 92 per cent of this year's crop will be of high medium grade and fit for commercial handling. This compares with 92 per cent of the 1927 crop and a 10-year average of 80 per cent. This year's crop is good in all sections of the state but with slightly higher averages in the areas of heaviest production.

PLEDGED LEGISLATION

A NEW farm relief bill, based upon the plan of the defeated McNary-Haugen legislation, but with the equalization fee eliminated, will be introduced early in the coming session of Congress, according to Senator McNary, who last week expressed the usual hope that his new bill may be enacted into law during the approaching short session. The actual chances of such a bill coming up before a special session is called, are slim. President Coolidge, in appropriate official language, has announced that if G. O. P. leaders want to wait until 1929 to study McNary's latest thesis, it's all right with him.

The grain trade, though, is enjoying what is probably its final period of grace insofar as "liberal" farm legislation delay is concerned. Pending, with the endorsement of President-elect Hoover, is some bill to provide what Mr. Hoover promised in his campaign: "Reorganization of the marketing system." Mr. Hoover says the program "may require several hundred millions of dollars to be advanced" as capital to co-operatives.

Such a program will make available to farmer-owned elevators and all types of farmer owned companies, funds on a long time basis, and at low rates. The independents will have to stand on their own feet, as usual, use their own surplus funds, regular bank facilities and compete with Uncle Sam's wards. We believe they can do it. There is a self reliance about independents which is a hard, cold business asset that even the most gushingly paternalistic

Government cannot dole out to its favorites from the public treasury. It takes more than a hand-out from the treasury to run a grain business.

EDITORIAL MENTION

A pool and its money are not soon parted. Hence interim payments.

When farmers achieve orderly production, there will be time enough for them to lecture grain traders on orderly marketing.

Once in a blue moon a best seller is of direct interest to grain men. "Hunger Fighters" by Paul De Kruif is a book not to be overlooked.

Another speediest loading record was made in Buffalo last month. The Great Eastern elevator took 364,683 bushels off the *Garreston* in 14 hours.

The Ohio Agricultural Experiment station recommends carbon bisulfide to destroy bean weevil. With so many non-explosive insecticides now developed, 1928 seems a strange year in which to see a high explosive agent endorsed.

A new grain moisture testing device, which reduces test time from hours to seconds, and, according to the Canadian inventor, "ensures infallible accuracy," has been announced in Toronto. This sounds almost as good and as bad as perpetual motion.

Pacific Coast wheat is being shipped through the Panama Canal to New York and relayed by water to Buffalo, Cleveland, Toledo and Detroit. This is a roundabout way of saying the Soft Winter wheat crop in New York and Michigan was below par this year.

Something interesting seems brewing in the world wheat kettle: Near famine in parts of Russia; 50,000,000-bushel reduction in the Canadian wheat crop guessed officially on November 12; sharp sags in visible supply figures; a "touchiness" in the markets, which is the opposite to the "nervousness" of a weak-trading period.

More than a score of Decatur (Ill.) housewives have protested to their city government against the dust, chaff, and smoke clouds originating in a grain elevator near their homes. The situation may be a nuisance to the housewives, but it is more than that to the elevator owner. The fire and explosion hazard of grain dust is one subject on which there is no conflicting evidence.

Our correspondent in Milwaukee expressed his opinion recently that "with malting business generally running less than a year ago, surprise is expressed that any malting concern should be in need of any greater capital supply." Said opinion in type drew a letter from the Ladish-Stoppenbach Company which declared: "The malting business is not running less than a year

ago but in large volume. The Ladish-Stoppenbach Company also owns and operates the Ladish Milling Company, and the increase in capital stock of our company is necessary for the growing needs of that company." We were going to referee the fight, but it seems to be all over now.

The Canadian pools are rapidly adding to their handling facilities, and this year will operate approximately 1,400 country elevators with country and terminal storage capacity, leased or owned outright by the pools, amounting to 80,000,000 bushels. If bigness is greatness, the Dominion pool is wonderful.

While the United States still ponders the corn-tariff tangle, Argentine shows how really easy this tariff business is when you have sliding-scale provisions. For November the Argentine export duty on corn was shifted from .75 pesos per metric ton to 1.12. When President-elect Hoover gets around there in December, it can be slid down.

The Kansas dealers and Federal grain inspectors are not slapping each other on the backs much this season. The dealers and farmers say that behind the technicalities of "ground odor" and "total damage," the inspectors are needlessly penalizing wheat that is fundamentally sound. The inspectors reply that a rule is a rule. Secretary Jardine has been appealed to, but the Weather Bureau in Topeka is really to blame for the whole business.

The Winnipeg office of the Canadian pool reminds us that in a recent editorial, we said: "Broomhall, in a review of world wheat conditions, directly charges the pool with responsibility for present low prices on the ground that pool managers, by promising higher prices, induced farmers to raise larger crops." Quite different, thinks the pool office, is what Broomhall actually states. Here are his words. Judge for yourself:

The origin of the present weakness and decline probably can be traced back to the tactics of the Canadian and Australian pool managers who have, since their inception, worked persistently to keep up the price of wheat above what is now evident was its true economic level, with the consequence that producers have been tempted to raise larger crops than consumers needed.

If the pool can get comfort out of such an indictment, we will not begrudge it.

Although the European corn borer is known widely and feared most because of the damage it does to the growing corn crop, corn is not the only plant it attacks. More than 200 kinds of plants have been listed by entomologists of the United States Department of Agriculture as subject to attack by the borer. It may live and reproduce on several common weeds. It has been known to enter greenhouses and cause damage to chrysanthemums. A number of crops, some not important in New England but of interest in other sections, have been attacked when planted there experimentally. These include the small grains, the millets and buckwheat, the grain and syrup sorghums, broom-corn, Johnson grass, Sudan grass and teosinte, cotton, tobacco, hemp, peanuts, soy beans, cow-

peas, okra, White Sweet Clover, and hops. The tests also included several crop plants which were never found to be infested, such as Alfalfa, flax, rye, sweet potato, upland rice, and velvet beans. Of those attacked the damage has been inconsiderable in most cases with the exception of hops and hemp. Rye couldn't be bothered with it at all.

Now that rust has been put under better control than ever before, millers, grain men, and farmers should use the cooperative machinery already set up, to oppose the wheat scab attacks. The parasites causing this blight hibernate on wheat straw and stubble. Dealers in the central states should make it known that much of the damage done by this fungus could be prevented by spring or fall cleanups of the stubble and straw which harbors it. Losses from wheat scab have averaged 12,000,000 bushels annually in the last nine years. That is about 10,000,000 bushels too many.

W. A. MacLeod, director of publicity for the Canadian pool, writes: "Seeing that you appear to be worried about the present condition of the pool, you might be interested to know that the Canadian pool has just started its second five-year term with a considerable increase in acreage signed up for the next five years. Instead of contracts falling off and farmers leaving the pool since the pool decided to pay 85 cents as an advance payment for this year's crop, contracts are continuing to pour in." (Eighty-five cents is less than the 1927 initial payment.) We surrender. It's the farmer that needs worrying about, and not the pool after all. The reminder is appreciated.

At six Federal laboratories located in districts infested by the corn borer, and at one European laboratory, research problems in borer control are being prosecuted tirelessly. But Dr. W. H. Larrimer, of the U. S. Department of Agriculture, who is general-in-chief of the anti-borer forces, is pessimistic of the progress thus far made. Speaking into the N. B. C. microphone this month, he declared: "It has become apparent that the natural spread of the pest cannot be stopped. The corn belt is going to get it." In concluding his statement, however, Doctor Larrimer said, "Although the corn borer is truly a grave menace to corn growers, the outlook is not so dark as it first appeared. The clean-up method of control has been proved effective in Kent and Essex Counties, Ontario, where complete destruction of the corn crop was observed over large areas in 1925 and 1926. Through the practice of clean-up measures, the corn borer has been reduced in numbers both in 1927 and in 1928. The corn acreage, which had been reduced 65 per cent, has this year been increased 25 per cent and very good mature corn is now being harvested in the same fields where complete destruction was experienced three years ago." Such results prove conclusively that farmers are both willing and able to control the corn borer once they have personally seen evidence of the severe damage that it is capable of doing.

W. H. TOBERMAN
St. Louis, Mo.

NEWS OF THE TERMINAL MARKETS

GEORGE S. DOLE
Chicago, Ill.

CHICAGO BOARD PLANS FOR STOCK TRADING

The directors of the Chicago Board of Trade recently appropriated \$100,000 to make necessary preparations for opening their own stock exchange. This move for early action follows the vote by the membership last May, to include stock trading in the activities of the Board.

The Chicago Stock Exchange has a rule that its members shall not trade in stock listed on another exchange in Chicago, and this rule will no doubt necessitate some transferring of memberships. In fact some memberships have already been posted for transfer. The number will not be large, however, and the prospect of stock trading has already had a material effect on the price of memberships, just as it had in New York and Boston when the grain exchanges in those cities added stocks to their activities.

Officials of the Board are reported to have declared that it is the intention to trade in all good stocks, regardless of whether they are listed on other Chicago exchanges.

DEATH OF JOHN H. JONES

John H. Jones, a director of the Chicago Board of Trade and an active member of that exchange since 1881, died on November 7, at his home, 4422 Ellis Avenue, after a short illness of pneumonia. Mr. Jones who was 68 years of age, had lived in Chicago since a child, and was widely known in business and financial circles.

Born in Pittsburgh, Pa., Mr. Jones came to Chicago with his parents at the age of six years. His business career began in 1881 with the firm of W. R. Linn which later became Linn & Dwight. Since 1888 Mr. Jones had had his own business. He served four years as a director of the Board of Trade, his first term beginning in 1902. He likewise held the office of vice-president in 1905 and 1906.

Thirty years ago Mr. Jones was known as one of Chicago's "most popular bachelors." He was unmarried. He was a member of the Chicago Club, the Chicago Athletic Association and the Glen View Golf Club. He is survived by three sisters, Mrs. John R. Levally, Mrs. C. F. Baldwin, and Mrs. Martha Simpson Symington, and an adopted son, John H. Jr. The latter, who was adopted by Mr. Jones three years ago, is now 9 years old.

STEBBINS HEADS NEW CHICAGO BRANCH OF OHIO FIRM

On the credit side of the Chicago grain trade ledger this month, the most significant entry is the leasing of a 450,000-bushel elevator and the opening of a Chicago office by the Cleveland Grain & Milling Company. To direct the development of a general grain business and the operation of the grain storage service station, George L. Stebbins, assistant secretary of the Cleveland concern, and a member of the Chicago Board of Trade for over 30 years, has been appointed manager. Arthur L. Grosstephan, formerly with the Bartlett Frazier Company, of Chicago, is in charge of the office at 166 West Jackson Boulevard.

The Erie Railroad Elevator, latest acquisition of the organization established in Cleveland during the nineties, brings the total storage capacity under the management of this firm up to 5,000,000 bushels. A reputation for progressiveness and straight dealing has been developed along with the physical assets of this company, and that fact, coupled with

the advantage of having a manager of long experience in the Chicago market, promises well for the future of an enterprise strategically begun.

The Erie house, which has undergone considerable remodeling, is in charge of Superintendent Van Cura. Driers are the main items of the new equipment installed.

LESLIE F. GATES DIES

The grain trade of the entire country received a shock on October 19, when the news was flashed that on the night previous, Leslie Freeman Gates, former president of the Chicago Board of Trade, died at Battle Creek, Mich.

While at French Lick, playing golf, Mr. Gates experienced what seemed to be a sudden attack of acute indigestion. This was on October 14. On Wednesday of the same week he was taken to Battle Creek, and he died there the following night. The autopsy established, however, that his heart had been affected and that the real immediate cause of his death was coronary thrombosis. Funeral services were held at the Wilmette Congregational Church on the following Sunday. Private burial was at Graceland Cemetery.

Mr. Gates, who was born in Canton, Pa., Decem-



THE LATE LESLIE FREEMAN GATES

ber 21, 1873, is survived by a widow, Josephine Lamson Gates, and a daughter Helen, who is a freshman at Swarthmore College, and by his mother, Mrs. Stephen Pratt Gates of Easton, Pa., a sister, Mrs. Sarah Gates Crockett, State College, Pa., and a brother, Harry C. Gates, Canton, Pa.

After graduating from Lafayette College, Mr. Gates became western manager of D. Appleton & Co., in 1899, entering the grain commission business as a member of the firm of Lamson Bros. & Co. in 1906. He was president of the Laurel Book Company, Chicago, and president of The Laurel Company of Laurel, Ind. He was secretary and treasurer of the Aberdeen Elevator Company, and was associated with numerous civic and commercial organizations, and was on the boards of several educational institutions.

In 1911 Mr. Gates was elected a director of the Chicago Board of Trade and served for six years. Since that time he had served almost continuously in various offices of the grain exchange. He was elected president of the Board of Trade in 1919 and reelected the following year.

For nearly 10 years he had been a member of the Legislative Committee of the grain exchange and in that capacity frequently acted as official

spokesman for the grain trade of the entire nation. On the subject of futures trading he was generally regarded as a leading authority.

Mr. Gates was a member of the Delta Upsilon fraternity, the Art Institute of Chicago, the Union League Club, City Club, North Shore Golf Club, and the Commonwealth Club. He was president of the New Trier High School Board and trustee of Lafayette College, and was vice-president of the Citizens' Association.

Rarely does the life of a citizen call forth upon its close, such tributes as have been expressed by men not only in the grain trade, but from bankers, educators, and civic leaders. Integrity, courage and intelligence of a high order made him respected and loved in every circle his rich personality touched. The grain trade has suffered a loss.

BUFFALO HAS EXCELLENT DEMAND FOR CORN

Th readjustment between the old and new crops of corn having been completed, there is an excellent demand here for corn and as the quality has proven a very pleasant surprise, a more than normal demand is looked for during the next few months, provided the price keeps reasonable, and present basis is considered reasonable by a majority of the trade. Feeding operations in the East are on a profitable basis and this will tend to make consumption large throughout the winter.

Light receipts of oats have tended to firm up this market and with stocks in elevator very light for this season of the year a continued good demand is expected for arrivals of this grain by rail.

Barley, which suffered a period of depression a month ago, is gradually coming into better repute again and prices show a tendency to firm up under a better demand both for malting and feeding.—*Market letter of November 10, by J. G. McKillen, Inc., Buffalo, N. Y.*

WHEAT MOVEMENT SLOW IN PEORIA

The movement of wheat in this territory has been almost nothing. What wheat the farmers have on hand they are holding for higher prices, but we do not believe that there is any large amount back. The new crop of Winter wheat went in under excellent conditions and the weather has been almost ideal for it since planting, and the fields now are greened up so that it makes it look almost like spring.

Movement of the new corn to the market during October and so far in November has been fairly large, but it has met with very good demand. In the last three or four days the movement has been a little light on account of wet weather interfering with the husking and shelling, but with better weather in sight, we again look for the movement to start in and gradually become fairly large. New corn started to move this year earlier than for many years back, and the quality is excellent, both as to moisture and condition.

We notice that the last Government report makes the crop around 2,900,000,000, although everyone feels that we have raised much closer to 3,000,000,000. Prices in the Peoria market have been as good, or better, than all other markets, and there is going to be an excellent demand here for it right along. The feeding of new corn this year has been about as early as the old time inhabitants can remember.

Movement of oats has been rather light but we look for it to increase a little as prices now are advancing some, but we do not look for any large

movement for quite a while to come. Feeding on the farms of this cereal has been on a tremendous scale and has started this year earlier than usual. Prices in this market have been very good and we look for them to hold well in line with other markets.—*Market letter November 10, of the Mueller Grain Company, Peoria, Ill.*

HOOSIER WHEAT RECEIPTS LIGHT

Our Indianapolis market has been receiving a nice run of corn and on account of the scarcity of old corn the early shipments commanded an excellent premium, but these premiums have declined now to a point where our spot market is only 2 per cent above bids for shipment. We look for these premiums to continue, however, as long as we have such adverse weather conditions for moving corn. The last day or two White corn in our market has jumped to 1½ cents to 2 cents premium over Yellow corn.

Wheat receipts are light. Premiums on Soft Red Winter wheat have declined some. There is a rather poor demand for wheat not of milling quality.

Our oats receipts are very satisfactory. There are plenty of oats to go around in our cash market and they are following very closely the advances and declines in the December.—*Market letter of November 10, from Cleveland Grain & Milling Company, Indianapolis, Ind.*

SIoux CITY ELECTS OFFICERS

At the annual meeting of the Sioux City Grain Exchange, held on October 20, J. C. Mullaney, H. S. Neveleir and J. S. Eales were reelected directors



FREEMAN BRADFORD AND CHARLES C. FLANLEY
Reelected Secretary and President, respectively, of the
Sioux City Grain Exchange

of the Exchange. These, with the holdover directors, S. P. Mason, Charles C. Flanley, Paul A. Ketels, R. E. Mangan, M. King and H. J. Hutton, elected the following officers for the year: Charles C. Flanley, president; H. S. Neveleir, vice-president; R. E. Mangan, treasurer; Freeman Bradford, secretary and traffic manager.

CORN ACTIVE AT PEORIA

The corn market at Peoria has been the active item in what has been done here. This market received, during the month of October, a very liberal quantity indeed of corn. The old practically all disappeared early and arrivals of new, taking it all in all, have been very liberal. The wet days have interfered with the country movement and so our arrivals have been very irregular, ranging from quite low up to very liberal.

The local industries have needed approximately 80,000 bushels daily and in one way or another have been supplied. Right now our arrivals are rather light and market is firm with good demand for all that is offered. We feel that a stretch of good weather would give us much better arrivals—though we actually think that the farmer is becoming

a little bullish and there is a general feeling of strength in corn values and we shall not be surprised ultimately to see an advance of 10 cents or more. Not right now perhaps but a little later.

Most everyone knows that this is a good corn market and we are glad to have corn shippers who are not familiar with conditions here investigate for themselves.

The movement of oats has been light here corresponding to most of the primary markets. There has been only a fair demand excepting for strictly good oats and these have been scarce. It looks to us as if the farmer had already fed a good portion of the last crop and we are not expecting a great improvement in arrivals at any time in the near future. Values here correspond favorably with other markets.—*Market letter November 10, of P. B. & C. C. Miles, Peoria, Ill.*

VOLUME OF GRAIN FUTURES TRADING IN OCTOBER

The volume of futures trading on the Chicago Board of Trade was considerably larger in October than in the preceding month, but it was correspondingly lower than in October of 1927. The October future totaled 1,227,868,000 bushels, divided among the various grains as follows, for the purpose of comparison the October figures being given in parentheses: Wheat, 714,916,000 bushels (628,301,000); corn, 435,720,000 bushels (345,894,000); oats, 33,955,000 (48,841,000); rye, 43,277,000 bushels (39,173,000).

The average open contracts in futures at Chicago in October, "short" side of contract only, there being an equal volume on the "long" side, were: Wheat, 120,644,000 bushels, as against 90,071,000 a year ago and 114,061,000 in September; corn, 81,548,000 bushels, compared with 68,679,000 last year and 77,168,000 in September; oats, 29,314,000 bushels, as against 36,353,000 a year ago and 29,562,000 in September; rye, 11,826,000 bushels compared with 10,038,000 in October 1927 and 10,431,000 in September of this year. The total average open contracts for all grains in October was 243,332,000 bushels.

WINTER WHEAT GOOD AROUND DECATUR

Only three or four days the past week were suitable for field work on the farm, the balance of the time we were favored with a good deal of drizzling rain. You seldom see Winter wheat looking so well as now, pastures are unusually good for November, farm animals turned into the cornstalks have their heads through wire fences much of the time, reaching for the luscious blue grass at the roadside.

Corn picking has been delayed so much by soft weather this fall that Thanksgiving will likely arrive (as usual) before this job is finished. Probably a scant one-half of Illinois corn is now out of the field. This delay in harvesting the corn crop is causing some uneasiness regarding the ability of sellers for November 15 shipment to get their contracts filled on time. In other words the movement of Illinois corn which started early and of pretty good volume, has not filled the urgent demand both domestic and export for this cereal. Many are also commenting on the figures published this week showing that corn crop in European countries over 100,000,000 short of last year's yield. The above facts no doubt had much to do with the higher prices offered for corn now compared with those of last week. Not so much corn traded in this week as last, farmers more interested in filling old contracts than in making new ones.

Government statistics show that 11,000 corn picking machines now on 5 per cent of Illinois farms, another new feature is public trucks which haul corn from farm to market for 1½ cents per bushel for first mile plus one-half cent for each additional mile which again suggests the question: Is the small farmer to be swallowed up by the large one? Our guess is that the industrious small farmer who spends the extra time made possible by improved farm machinery feeding any or all kinds of stock, poultry and dairying will yet win out. Should he

be able to co-operate with his landlord in such ventures, so much the better all around.

Dealers report a small increase in sales of corn crib lumber this year. Oats market shows a little more life as winter approaches. Values here: No. 3 White corn 78 to 80; No. 4 White corn 76 to 76½; No. 3 Yellow corn 78 to 80; No. 4 Yellow corn 76 to 77; No. 3 White oats 41½ to 42.—*Market letter of November 10, by H. I. Baldwin & Co., Decatur, Ill.*

NEW DIRECTORS OF THE G. D. N. A.

Each year the Board of Directors of the Grain Dealers National Association, presents a few new faces of leaders in the trade who have been called to help guide the destinies of that organization. In Boston last September, 11 new directors were chosen and seven of them are presented here. All of them are well known in the trade and their counsel will be of the greatest value to the Association.

Mark Steele is president of the Townsend-Ward Company of Buffalo, N. Y., and is an able representative of that important market.

John H. Caldwell, vice-president of the Ralston



J. A. REYNOLDS
Albany, N. Y.



J. H. CALDWELL
St. Louis



MARK STEELE
Buffalo



C. D. STURTEVANT
Omaha



HOWARD LIPSEY
Chicago



A. C. KOCH
Breese, Ill.



JOHN S. GREEN
Louisville

THE NEW G. D. N. A. DIRECTORS

Purina Company of St. Louis, Mo., is one of the most able leaders in the feed industry of the country.

John A. Reynolds of Albany, N. Y., for many years has conducted a feed business under his own name at that point and is well known in the eastern territory.

John S. Green of H. Verhoeff & Co., Louisville, Ky., is a well known figure in the trade, having served the association in many capacities, including four terms as vice-president.

A. C. Koch of Breese, Ill., is serving his third term as president of the Illinois Grain Dealers Association, the organization which has given to the National Association six presidents, E. S. Greenleaf, T. P. Baxter, A. G. Tyng, E. M. Wayne, Lee G. Metcalf, and Fred G. Horner.

C. D. Sturtevant, active head of the Trans-Mississippi Grain Company of Omaha, Neb., is retiring president of the National Association, having served two terms distinguished by fine constructive work.

Howard Lipsey, manager of the domestic department of the Norris Grain Company, Chicago, has made a real place for himself on the Chicago Board of Trade, being a director, and on the Executive, Warehouse, and Weighing and Custodian Committees. He is a distinct addition to the National Association's official family. We hope to present the remaining new directors next month.

CHICAGO BOARD LEGION POST AIDS
SICK COMRADE

Returning from the national convention of the American Legion, at San Antonio, last month, the Chicago Board of Trade Post 304 participated in a number of interesting events and indulged in sight-seeing at various points. They attended receptions at Houston, Galveston, New Orleans and Memphis, and it was while lunching at the famous La Louisianna, as guests of the New Orleans Cotton Exchange, that a call came for Commander Jack Fisher. It was about a comrade named Gilbert who was in a serious condition there at the Marine Hospital and not expected to live. The Chicago Board of Trade post decided to take a chance and arrange for his transfer to the Speedway Hospital, Maywood, Ill., bringing him home so he might once more see his mother and son.

Accordingly, the club car of the special train on which the men were traveling was converted into a hospital car. Train officials gave special orders, and for the first time in the history of the Illinois Central, a "special" was given right of way over the Panama Limited flier. Gilbert arrived the next morning, October 13, in Chicago, still alive, and his mother and son awaited him at the station. Gilbert, his body muffled in a blanket, was borne on a stretcher by six of his fellow soldiers of the late war.

"He will die this week," the attending physician in the ambulance prophesied. But with a shriek of its siren the ambulance was off and he was taken to the Speedway War Veterans' Hospital. Some three weeks later, Gilbert was still alive and it was announced that he had a fighting chance for his life. Every possible assistance and encouragement have been given him since, and as we go to press it is reported by August C. Henning, publicity officer of the Chicago Board of Trade post, that the patient's condition is very favorable.

CHANGES IN MEMBERSHIP

Chicago.—The memberships on the Board of Trade of the following have been transferred: Gustav F. Ewe, Thomas K. Christie, William B. Burr and Wilbur W. Young. The new members on the Board are: Paul C. Rutherford, Harold C. Hanson, John Vesecky and Philip E. Gilbert. Ashley O. Jones, Jr., was suspended on September 25 for six months; Harold J. Droeger, on October 2 for 10 days; Ernest H. Wichelman on October 2. Reported by Secretary Fred H. Clutton.

Duluth.—New members on the Board of Trade are: C. H. Peterson, R. F. Straub, J. B. Gilfillan, W. G. Webber. The following have withdrawn their memberships: E. H. Smith, A. Hansen, C. N. Harrington and Percy Fuller. Reported by Secretary Charles F. MacDonald.

TERMINAL NOTES

William E. Maloney is traffic commissioner for the Buffalo Corn Exchange.

Leonard M. Spitzglass is now a general partner in Stein, Alstrin & Co., Chicago, Ill.

A grain brokerage house has been opened in Portland, Ore., by Anderson & Fox, San Francisco and New York.

The new offices of James E. Bennett & Co., at Jacksonville, Ill., have been opened. The offices were remodeled and redecorated.

N. Gray is now associated with the Art Hoffman Grain Company at Salina, Kan. He was formerly with the John Hayes Grain Company.

James Richardson, of James Richardson & Sons, Ltd., Winnipeg, Man., has been appointed a director of the Lake Shippers Clearance Association.

Group insurance has recently been provided for the 300 employees of the Chicago Board of Trade. Under this each will be insured for \$500.

New offices are occupied by Riordon, Martin & Co., at 513 Austin Building, Chicago, Ill. The company was formerly in the Board of Trade Building.

E. E. Hall has moved from Winnipeg to Vancouver, B. C. Mr. Hall has for 20 years been with

the grain trade of Winnipeg and is president of the Central Grain Company and the Hall Company, Ltd. He will enter the financial investment field on the Pacific Coast.

Mackin & Schlesinger, Inc., have incorporated at Manhattan, N. Y., and will deal in grain, etc. John A. Mackin, 277 Ogden Avenue, Jersey City, N. J., is interested.

The Vancouver, B. C., office of the Continental Grain Company, Ltd., Vancouver, B. C., is under the management of A. J. Diamant. He is vice-president of the firm.

The Mobile Chamber of Commerce, Mobile, Ala., is contemplating a grain and hay inspection service. The inspector would be licensed by the Federal Government.

Probably cottonseed and cottonseed meal futures will be handled by the Merchants Exchange of Memphis, Tenn., after the first of the year. A charter was lately applied for.

The Schreiner Grain Company, Not Inc., has been organized at Chicago, and will have offices at 309 S. La Salle St. Francis L. Schreiner is a member of the Chicago Board of Trade.

The head office of Spillers, Ltd., London grain exporters, has taken over the New York Agency of Spillers, Ltd., in New York and will conduct it under the name of the parent organization.

To deal in grain and agricultural products, Horton & Co., Inc., have been incorporated, capitalized at \$10,000, at Minneapolis. The incorporators are L. E., and Elsie Horton and M. H. McDonald.

On November 10, George Booth of Lamson Bros. & Co., Chicago, was rushed to the Presbyterian Hospital and operated upon for appendicitis. As we go to press, he is reported to be recovering nicely.

Peter P. Mullen has resigned as assistant secretary of the Boston Grain & Flour Exchange. He is to be associated with the Acheson Flour Company, Inc., and will cover New England territory for them.

Samuel P. Hinds has retired from the grain business and will conduct a real estate development proposition in Fort Pierce, Fla. Mr. Hinds was for 25 years a member of the Kansas City Board of Trade.

David D. Tenney has been made president of the Civic & Commerce Association of Minneapolis, Minn., succeeding A. R. Rogers. Mr. Tenney is a Minneapolis grain man, at the head of the Tenney Company.

Under rules adopted by the Duluth Board of Trade, the shipper and not the commission house must bear the fees paid for obtaining samples of grain for the Federal Supervision Department to determine appeals.

On October 17 members of the Chicago Board of Trade adopted an amendment to the rules of the Board authorizing the directors to use the proceeds of transfer fees to purchase memberships for retirement at \$12,000.

The Lamson Bros. & Co., Chicago, Ill., has notified us that that firm is not establishing an office at Milwaukee, Wis. Last month we had an item to the effect that a wire had been opened with William Schroeder in charge.

An office has been opened at Toledo, Ohio, by W. E. Hutton & Co., with Walter Haskell as manager, assisted by Carl Goodman. Arthur Mylander, formerly associated with Southworth & Co., will also be identified with the new branch.

The Bunge North American Grain Corporation of New York, N. Y., has opened a new office at Duluth. C. H. Peterson will be local representative. Robert F. Straub, vice-president of the company, has been elected to membership on the board of Trade.

The Consolidated Feed & Grain Company of Buffalo, N. Y., has opened a consignment department under the management of Dan A. Southwell. Mr. Southwell was formerly connected with the Eastern Grain, Mill & Elevator Corporation at Buffalo.

S. Nomura, formerly of the New York office of Mitsubishi Shoji Kaisha, Ltd., of Kobe, will be in

charge of the Seattle branch of the company succeeding Shuzo Simatani. T. Shimasaki will have charge of the grain department with E. D. McPherson.

The Kearney Grain Exchange has been formed at Kearney, Neb., with J. P. Gibbons president; D. P. Rankin, vice-president; and Wallace Thornton, secretary and treasurer. C. V. Swan is the licensed grain inspector there.

An automatic device for sampling wheat being loaded into barges or sea going vessels has been patented by W. C. Wheeler, grain sampler in the Federal Inspection Department in St. Louis, Mo. He has applied for a patent in the United States Patent office.

Offices have been opened at 323 South La Salle Street, Chicago, Ill., by Charles A. Peck as Charles A. Peck & Co. He was for years a member of the Chicago Board of Trade and was connected with A. J. White & Co. for 20 years. Later he was a partner in E. Newman & Co.

A commission business is being conducted at New York City by Walter G. Munn who was of late manager of the New York office for Lamson Bros. & Co., Chicago. He was succeeded there by Joseph H. Mathews, assistant manager, who is succeeded by Guy C. Hamilton.

John Pfeiffer and Charles B. Watson have organized the Queen City Feed & Grain Company at Buffalo, N. Y., and have offices in the Commercial Trust Building. Mr. Pfeiffer was formerly with the Basil Burns grain office and Mr. Watson was with the Churchill Grain & Feed Company.

The Toronto, Ont., office and business of Chaplin Bros. & Co., Montreal have been taken over by D. O. Ellis, grain merchant. The Chaplin firm is retiring from business at Toronto and will confine itself to its Montreal business. A. E. McCuaig is associated with Mr. Ellis in his new undertaking.

The brokerage department of Benham & Co., Inc., New Orleans, La., is under the management of A. D. Keller. Mr. Keller resigned as assistant manager of the grain and hay department of J. S. Waterman & Co., Inc., after five years association with that firm. Gordon Tonry succeeds Mr. Keller in his old position.

A complete protein laboratory is to be installed for the St. Louis (Mo.) Merchants Exchange and operated in conjunction with the other departments of the exchange. The exchange will establish the policy and charges of the laboratory. A. V. Imbs, L. F. Schultz and P. C. Knowlton are a committee which will make the necessary arrangements for the establishment of the laboratory.

A partnership has been formed by Alfred Lawton, Jr., and C. M. Hardman at Pittsburgh, Pa., as Hardman & Lawton, and will succeed Hardman & Daker at Pittsburgh. Mr. Lawton has been associated with H. O. Morgan for 35 years but this firm recently went out of business and the good will of the firm relinquished to Mr. Lawton. The new firm will conduct a grain, mill feed, hay and straw business.

S. W. Metcalfe and S. C. Sieburth have incorporated as grain brokers at Vancouver, B. C., as Metcalfe & Sieburth, Ltd. Mr. Sieburth is to be located in Vancouver in charge of the company's business there. He was associated with the National Elevator Company for 18 years. Mr. Metcalfe commenced in the grain business at Winnipeg in 1901 and moved to Calgary in 1908. With E. S. Monro in 1910 he established the first cash grain brokerage business to be started there.

Pending the early tearing down of the old Chicago Board of Trade Building, the following firms have found new quarters: Chas. D. Campbell, and Bridge & Leonard at 401 South Dearborn St.; John West & Co., Geo. F. Swenson, Edgar D. Risser, McKerr & O'Connor, S. J. Feeney & Co., Requa Bros. Frank J. Delany, Rural Grain Co., Peter B. Carey, 332 South LaSalle St.; Uhlmann Grain Company, 538 S. Clark St.; James A. Begg, B. B. Denniston & Co., 327 South La Salle St.; J. C. Wood & Co., 105 W. Adams St.; Herbert Schram, 421 S. Clark St.

TRADE NOTES

The Standard Universal Hammer Mill, made by the Hesse Manufacturing Company of Leavenworth, Kan., has just been put on the market after a long period of experimenting and testing out under the most severe conditions. Application has been made for patents covering the important and interesting features.

The Cutler Dryer Company of North Wilbraham, Mass., was formerly known as the Cutler Company, but the driers made by the company have served so successfully in cereal plants of all kinds for over a period of 40 years, that the high reputation of the product is now capitalized in the new name. If you have a drying problem, see what that 40 years of experience has taught.

The Humphrey Elevator Company, of Faribault, Minn., has some interesting figures on the time and labor employees' elevators can save in a plant. They also take the irksomeness out of the long trip upstairs at the close of the day and assure inspection of the elevator head before closing down. Heated elevator heads are a source of many fires, so an employees' elevator in your house is good insurance.

The conveyor belt stand with the patented jaw construction which permits a pivotal action without a center pivot in the way of the return belt, which Barton Ross of 6219 Kenwood Avenue, Chicago, has patented and which he desires to dispose of, is in operation in a Chicago elevator and has given fine results even on a belt which had hitherto given constant trouble. Very often a device of this kind makes all the difference between difficult and easy operation.

Smutty grain has always been a problem. A special survey made by the A. C. Nielsen Company, engineers, in a Pacific Coast plant, shows that Wolf Wheat Washers made by the Wolf Company, Chambersburg, Pa., have proved so successful in cleaning smutty grain, that they are rapidly replacing the liming and scouring process formerly used. Every elevator in a neighborhood where smut prevails would do well to ask for one of the Pacific Coast Grain Terminal Elevator surveys, which may be secured from The Wolf Company.

The Mutual Fire Prevention Bureau of Chicago has published a booklet on "Anti-Friction Bearings for Flour Mills, Feed Mills, and Grain Elevators," which is a most valuable addition to the literature of this important subject. Every phase of the bearing problem is discussed with particular attention to the hazards of improper bearings, although the economic side is by no means neglected. This booklet will be sent free to all who desire it and may be obtained from the Mutual Fire Prevention Bureau or any of the mill and elevator mutual fire insurance companies or their agencies located in the larger cities all over the country.

CHANGE FOR INTERSTATE ELEVATOR AT CHICAGO

The Erie Railroad Company has leased its Interstate Elevator at 51st Street in Chicago to The Cleveland Grain & Milling Company of Cleveland, Ohio, and has let a contract for the remodeling of the house to The James Stewart Corporation. Many improvements are to be added and, when completed, it will be a thoroughly modern plant, capable of handling a large volume of business efficiently and rapidly.

The house contains cleaners and clippers, and in the remodeling contract provision is made for adding two Randolph Direct Heat Driers. These driers will have a capacity of 25,000 to 35,000 bushels per day and will be operated with the Randolph Direct Heat System with automatic temperature control and automatic discharge. The Cleveland Grain & Milling Company also operates elevators at Cleveland, Ohio; Mansfield, Ohio; In-

dianapolis, Ind.; and Champaign, Ill. A Chicago office was opened up on November 1 at 166 West Jackson Boulevard, under the management of George L. Stebbins.

J. A. MANLEY TO DIRECT FAIRBANKS-MORSE SALES

John A. Manley, who has, for the past three years, been manager of sales development for Fairbanks, Morse & Co. of Chicago, has been elected vice-president in charge of sales, according to a recent announcement of the Board of Directors. Mr. Manley, whose career has been one of rapid advancement in the business world, was formerly manager of accounts for the nationally known advertising agency of Henri, Hurst & McDonald, also of Chicago. In his connection with advertising work Mr. Manley made a detailed study of the problems of industrial business development and it was the result of this work that brought him into the Fairbanks-Morse organization.

In 1911 he was graduated from Northwestern University and entered the sales department of the Republic Tire & Rubber Company. After four years with this organization he joined the advertising staff of one of the Chicago newspapers. Later he was connected with Hart, Schaffner & Marx, studying the problems of the retail merchant, and



JOHN A. MANLEY

after two years in this connection went with Henri, Hurst & McDonald.

In its varied line of products which include Diesel engines, pumps, motors, scales, railway equipment, small light plants and automatic water plants and similar items, Fairbanks, Morse & Co. has an interesting sales problem. That the problem is being effectively handled under the present management is shown by the steadily increasing volume of business flowing into the Fairbanks-Morse organization.

60-HORSEPOWER DRIVE FROM STOCK

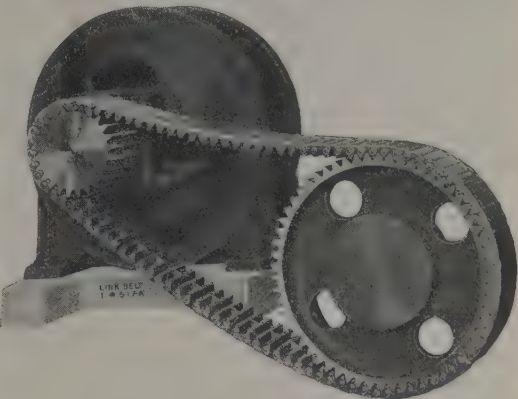
Link-Belt Company's new Silent Chain Drives from stock book, just published for their trade, evidences the soundness of an idea advanced by that organization some four years ago, when they inaugurated the plan of furnishing silent chain drives from stock. At that time they announced that silent chain drives of 1/2 to 10 horsepower would be available from stock, as a joint result of standardization and quantity production.

Therefore, for more than 20 years, the installation of silent chain drives had been strictly an engineering problem. By their plan, they proposed to so simplify the ordering of drives, through the provision of carefully arranged tables, etc., that their customers would be enabled to order direct from stock. In 1926 the range of horsepower was increased to 15 horsepower.

Now, two years later, and only four years after the idea gained its first impetus, the demand for drives from stock has made it necessary to in-

crease the range to 60 horsepower. According to their latest silent chain publication, Book No. 725, it will be possible to obtain drives as high as 60 horsepower in practically any reduction from 1 to 1 to 7 to 1, for immediate delivery, by distributors in the principal cities of the United States.

The "drives from stock" plan does not, of course, in any way affect the range of horse-powers available in the silent chain engineering drives which



A LINK-BELT STOCK DRIVE

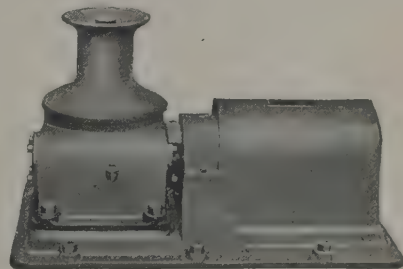
this company furnishes to industry in general, in drives up to 1,000 horsepower and over. Link-Belt Company's production of silent chain drives is entirely concentrated in one plant—the Dodge Works, at 515 N. Holmes Avenue, Indianapolis, of which James S. Watson is manager.

WELLER CAPSTAN CAR PULLERS

The Weller Manufacturing Company of Chicago has built car pullers for years, including a complete line of the horizontal capstan and drum types. To round out the line the company has designed two sizes of the Upright Capstan Type which are electrically operated.

The new type of Weller Capstan Type Car Puller is a compact, self contained unit, occupying very little space. It is easily operated and is practically fool proof. It will pull in any direction or at any angle. It operates at the touch of a button. The consumption of power and expense of operating is very little. The C1 will develop full strength of 1 1/4-inch manila rope and will pull from one to three cars. The C-2 will develop full strength of 1 1/2-inch manila rope and will pull from three to six cars.

A car puller installed does away with waiting for the switch engine and crew, also saves the



WELLER CAPSTAN TYPE CAR PULLER

time of the regular force who are usually compelled to stop their work and move the cars with pinch bars. It is also adapted for other purposes such as moving cars in and out of kilns, moving heavy trucks and pulling materials around the yard or plant. Descriptive circular and prices will be sent by addressing Weller Manufacturing Company, 1820 N. Kostner Avenue, Chicago, Ill.

THE ethyl-mercury chloride dust, developed by Dr. Benjamin Koehler, at Urbana, Ill., is a high-powered smut preventive twice as potent as the ordinary liquid formaldehyde, and capable of nearly doubling the yield of oat seed treated with it. This is the claim of those witnessing the production trials run at the Illinois College of Agriculture to test the merits of the new treatment. Materials for the inoculation cost about 10 cents per bushel, according to Dr. Koehler.

Hints for the Elevator Millwright

Fire Protection for the Elevator—Steam and Motor-Driven Pumps— Wet and Dry Sprinkler Systems

By JAMES F. HOBART

"MR. DAVIS," remarked Mr. Thomas Dixon of the Hillside Elevator, "can't you dope out some form of fire protection for this elevator, which will appeal to the fire underwriters enough so they will reduce the enormous rate which I am now paying? This is a water-driven elevator, with auxiliary steam power, and we also have a couple of electric motors in use. It seems to me you might put in a system of piping for sprinklers or for fire hose, and then install one of those small but powerful rotary pumps which are driven by friction gears directly from the main shaft of the elevator. Once started, such a pump would run and supply water as long as the water wheel could revolve, and that is about the last thing to be put out of business in a mill fire. With such a pump in place, it looks as though that in case of fire, it would only be necessary to throw a lever to start the fire pump going and throw plenty of water for sprinklers and fire-hose, or for both?"

"Mr. Dixon, there used to be lots of those power fire pumps in use, but I do not call to mind a single concern which has one of them in reserve for fire purposes, today. The insurance people 'look side-wise' at such installations, for they have been found far from reliable. Usually connected direct to the flume or forebay, the pump is always under water supply, and in time, becomes filled with slime and silt, and is sometimes rendered inoperative thereby.

"Furthermore, the pump drive usually consists of a pair of grooved, pulleys meshing together under considerable pressure and standing a small fraction of an inch apart while the pump is not in use. In more than a few instances, it has been found that upon trying to start the pump in case of fire the friction gears had worked into mesh slightly, or had been left not fully separated the last time the pump was tested, and that the revolving friction on the main shaft had ground holes into the friction on the pump shaft, rendering it impossible even to start the fire-pump until after the friction had been redressed in a lathe or a new friction put in place. Get away from the friction water cure idea, Mr. Dixon, for it is not a good one."

ELECTRICALLY OPERATED FIRE PUMPS

"Mr. Davis, how about an electrically driven fire pump? It would be, it seems to me, impossible to operate such a pump slowly enough to keep it in motion all the time, so, what would happen were I to put in a fire pump operated by a special electric motor?"

"Then, Mr. Dixon, your troubles would begin even before the pump were installed. Put in such a fire-pump on your own hook and quite likely the underwriters will refuse insurance, or at least, refuse lower rates on account of the pump. If you decide to use an electrically driven pump, consult the underwriters before making a single move in the matter; then, you must be guided by the underwriters absolutely as to what kind of, and how, a pump and motor shall be installed. You must do exactly as they say about setting up and operating the pump. Furthermore, you will find that the cost of your insurance still contains the amount of premium necessary to cover the failure of electric current and other contingencies pertaining to the operation of electrically driven machines."

CONCRETE THE BEST INSURANCE

"It looks as though I were 'between the devil and the deep sea,'" said Mr. Dixon as he looked over the notes he had made of Mr. Davis's remarks. "I don't see my insurance getting much cheaper very fast."

"Concrete makes the best insurance policy, Mr. Dixon. It does not lapse through non-payment of premiums, neither will such a policy be cancelled without notice for foolish or bull-headed acts on the part of the insured. Build a concrete elevator, with nothing to burn in storage bins or building—save

their contents, and the underwriters will gladly give you their very best terms for insurance. In a wooden elevator, you pay enormously for insurance, anyway you can figure it. If you load up with fire-pumps, hose and other fire-fighting appliances it is a question which will cost you the most to pay the price demanded for straight insurance, or to pay for the installation and upkeep of the things which you hope will reduce the cost of premiums appreciably. But, before you load your wooden elevator with fire-fighting apparatus, do some mighty close figuring as to the actual cost of insurance, both straight, or without fire pumps and such things, and then, with such appliances. While you are doing such figuring, do it with the help of a reliable insurance man who can probably tell you some things regarding the actual cost of the up-keep of fire apparatus, which may make your eyes stick out and possibly change your ideas somewhat as to the profitable installation of fire-fighting apparatus in a wooden elevator, which may burn up before such appliances can be brought into use."

AUTOMATIC SPRINKLERS

"But, Mr. Davis, there must be some way of obtaining protection from fire without paying double for it. How about automatic sprinklers? Won't they give protection and cause a lowering of insurance rates?"

"Not as much as you may suppose, Mr. Dixon—not in a wooden elevator anyway, where there is every possibility of a total loss in case it gets on fire. But if you wish, we will look into sprinkler systems and see what they are good for. There are two systems of automatic sprinkling, the 'wet' and the 'dry'. In the 'wet' system, the sprinkler pipes are connected directly with a water tank of considerable capacity and when one of the sprinklers—or more than one, may be opened by too great a degree of heat, then all the water in the tank is available for quenching the fire which caused the sprinkler heads to 'go off'.

"The advantage of this, the 'wet' system, is that water reaches a fire instantly a sprinkler head opens and there is no waiting for mechanism to act in turning on a supply of water. The great disadvantages are: The system is liable to freeze up in cold weather, with burst pipes and inoperative sprinkler heads to tell the story of a freeze. There is also the constant danger of the smaller pipes and the sprinkler heads becoming choked with rust and sediment, thus making it utterly impossible for water to issue from the pipes should any head be opened by fire or excessive heat. 'Wet' systems can only be kept in perfect working order by thoroughly and frequently flushing out each piece of sprinkler pipe, and by removing and carefully clean each automatic "sprinkler head and by also making sure of cleanliness in the fitting from which each head was removed for inspection and cleaning.

THE DRY SPRINKLER SYSTEM

"The 'dry' system of automatic sprinkling, has, as its name implies, no water in the sprinkler pipes, which are filled with compressed air, until one or more of the sprinkler-heads open permitting the compressed air to escape. The consequent reduction of pressure permits the operation of an automatic valve which then opens and allows water under pressure to fill the sprinkler pipes and to flood everything below and around the opened heads.

The advantages of the 'dry' system are, the absence of danger from freezing or the clogging of pipes or heads with rust, silt or sediment from water long confined in pipes, and the absence of water to cause damage through slow leaks in the pipes. The disadvantages of the 'dry' system are in the maintenance and care of the automatic valve, the setting of which after the pipes have been flooded, is sometimes a bothersome task. There is

also the draining completely each time of the sprinkler pipes after water has been in them. There is also the care and maintenance of a source of compressed air, which, while not required under any considerable pressure, must be kept pretty constant, and above the figure at which the automatic valve will admit a water supply. Some automatic valves are very troublesome, 'going off' under the least provocation, admitting water to the pipes and necessitating draining the pipes again."

FIRE HOSE AND CONNECTIONS

"Mr. Davis, how would it do, when a fire-pump is in use, to run a stand-pipe from the pump to the top of the elevator, and at each accessible point, have a length or two of fire hose permanently connected to the stand-pipe with a nozzle on each hose? Then, in case of fire, it would only be necessary, after the pump had been started, to open a valve at a point near the fire and a stream of water would be available at once. I should think such an arrangement would find favor with the insurance people, materially lessen the cost of insurance and afford ready means for quenching a fire almost before it gets under headway."

"Mr. Dixon, the scheme is no good and the underwriters know it very well, and will quickly tell you where to get off at, should you put such apparatus into your elevator. To begin with, permanent, fixed hose and connections to a stand-pipe usually prove to be utterly inaccessible when fire breaks out. The smoke is so thick the workmen lose their way in trying to reach a hose and its valve, and, ten to one, if a hose is dragged down, they forget to open the valve and no water is forthcoming and the hose is abandoned. It is quite probable that no hose can be reached save those below the line of the fire, and so the fire hose lay-out proves utterly worthless.

"In using fire hose as you suggest, you will find one great defect which sometimes amounts to a vital one and means probably the complete destruction of your elevator. There are several lesser evils which I will describe to you a bit later. But the one vital thing which sometimes renders fixed fire-hose totally inoperative, is in the attaching of the hose to the stand-pipe. A stop valve is attached to the stand-pipe, then a nipple and hose connection and lastly, the hose is screwed on, and now comes the problem of what to do with hose that it may be kept there in perfect condition for instant use when needed. This problem is often a stumper. If the hose is wound on a reel, it must be pulled off the reel upon the floor in order to get at the nozzle. Quite likely, in the excitement of the moment, the hose will become badly kinked and the bad matter complicated by turning on the water before the hose has been straightened out. Here is where the vital defect makes itself known. Mr. Dixon, and on two occasions, I have personally seized and unreeled stand-pipe fire hose, when water was badly needed, only to have the hose fall off the stop valve rotted completed off by time, under the influence of water which had leaked slowly through the stop valve and kept the cotton hose wet until it decayed. I have, upon inspection, found dozens of similar instances, and any insurance inspector will give a 'black eye' to the use of stand pipe hose unless real precautions are taken to prevent wetting of the hose when the stop valve is closed."

"It is done, by the use of a special nipple between the stop valve and the hose coupling. A very good way is to have a special nipple made with an enlarged chamber in its mid-section. A small pipe should be tapped into this enlargement, projecting vertically downward and fitted with a small stop valve by means of which the small pipe may be closed when water is turned on. Should the little pipe be left open, it is so small that it will have little or no effect upon the water flowing through the hose.

"With the little pipe left open all the time, water which leaks through the large stop valve escapes through the small pipe and does not reach the hose fabric at all."

"Mr. Davis, you said something about the cussed-

ness of reels for stand-pipe hose. Isn't there any better way of keeping such hose until needed for fire fighting than by winding it upon a reel?"

"Yes, Mr. Dixon, there is a sort of shelf on the market, upon which a length of hose may be laid, and which is pretty good, provided care is taken of the hose. The little metal shelf, placed in line with the stand-pipe stop valve, has low metal open-work sides, between which, and upon the shelf of like construction the hose is placed. The hose is attached to the valve, then bent up in a vertical loop, upon the shelf, the loop being inclined toward the stop valve just enough to prevent the hose-loops from falling down. Loop after loop, each about 18 inches high, are placed on the little shelf, until all the hose has been thus placed, with the attached nozzle 'ended-up' against the last hose loop."

"That looks might good to me, Davis, a man can grab the nozzle, run with it and the hose will unfold and lie out flat, ready for the water."

"Yes, Mr. Dixon, the shelf hose support is all right, provided you take care of it. But neglect the hose for months, and it may be found damaged or spoiled by dirt which has collected in the cross-wise folds, and in some cases, actually rotted out the fabric. Hose thus supported, should be regularly removed, cleaned, and replaced with the folds in different places from where they were last. Do that regularly and the hose-shelf is a good thing to have in the elevator."

A NEW ELEVATOR IN OREGON

It is practically impossible for us to foresee what increases are still to come, but the fact remains that the increases occurring in comparatively recent

vator erected by the Farmers Mutual Warehouse Company in Helix, Ore.

This new house is of wood crib construction, and was built on a concrete mattress slab. It is 53 feet in length and measures 50 feet in width, with a height of 72 feet to the eaves. This space has been divided into 24 bins of suitable sizes for segregating the different commodities and grades to be housed. Both the building itself and its roof have been steel sheeted.

It is equipped with two legs, which are driven by two motors supplied by Fairbanks, Morse & Co. They are of 10 horsepower, Type HJC. A No. 8 Monitor Cleaner is located on the work floor, having been furnished by the Huntley Manufacturing Company, Brocton, N. Y., and this is driven by a 7½ horsepower Fairbanks Morse Type HAC Motor. There is also a manlift, an air dump, and a 15-ton Fairbanks Receiving Scale. A 10-bushel automatic shipping scale has been placed in the cupola.

The capacity of the house is 120,000 bushels of grain. The management reports that it was loaded to capacity this season and worked with perfect satisfaction throughout.

The Farmers Mutual Warehouse Company was organized in June, 1909, for the purpose of conducting a grain storage business, and it has been engaged successfully in that activity ever since. The company has handled and stored mainly sacked grain, and has had an increasing trade, founded upon good management and fair dealing. In addition to this elevator, the concern owns four warehouses for storing sacked grain.

The officers include: R. Henriksen, president; G. Tergeson, vice-president; and A. E. McCulley, secretary. The manager of the house is F. E. Engdahl. The illustration which appears at the left was made from a recent photograph of the plant, and will give an excellent idea of its general appearance.

THE GRAIN MARKET SITUATION

By G. A. COLLIER

Grain, Hay and Feed Market News Service Bureau of Agricultural Economics, U. S. Department of Agriculture.

No outstanding changes have taken place in the grain market during the past month. The wheat market has continued weak influenced by heavy marketings from the Canadian crop and record accumulations of wheat in North American markets. Prospects of large crops in the Southern Hemisphere, together with larger wheat crops in important European countries, also have contributed to the weakness of the wheat market. Corn prices have worked to a new crop basis but with the supply but little larger than last year and the movement delayed by unfavorable weather in the corn belt the general market situation continues firm. Diminishing supplies in Argentina and another short crop of feed grains in Europe have also contributed to the strength in the corn market. Oats have held steady in sympathy with the firm corn market and also as a result of a fairly active demand for limited offerings. Rye has continued weak with wheat. The barley market is dull with demand slow, except for best malting types which are in light supply. Exports have been larger than last season but the current demand is hardly sufficient to absorb the offerings from this season's record crop.

The 1928 wheat crop in 35 Northern Hemisphere countries which represented about 86 per cent of the estimated world total last season, excluding Russia and China, is now placed at 3,249,235,000 bushels compared with 3,053,924,000 bushels in those countries last year. The Southern Hemisphere crop now promises to be larger than last season. The Australian production has been unofficially estimated at 168,000,000 bushels. A record acreage of wheat is reported in Argentina, the area in this grain being officially estimated at 20,100,000 acres, or about a million acres over the area harvested last season. Weather conditions in the Southern Hemisphere have been generally favorable for the growth of the crop and harvesting has already begun in the northern sections of both Argentina and Australia. Based upon earlier estimates of

the amount available for export from Argentina and Australia and trade reports of shipments, stocks of old wheat in these countries are relatively small. Shipments, however, from both countries are running between one and two million bushels each week, which would indicate that considerable grain still remains for export and that more wheat was available than last season's production estimates indicated.

Probably the most outstanding feature in the wheat market during the past month has been the record marketing of Canadian wheat. Around 200,000,000 bushels of wheat had been received at the Canadian terminal markets up to the last of October. Stocks in store at the first of November totaled about 156,000,000 bushels and, together with the 140,000,000 bushels in store in the United States, made a record accumulation of North American wheat at this date for which export demand is only moderate.

A considerable percentage of the Canadian crop is reported to be of rather low quality again this season and it is officially reported that the Canadian crop will fall several million bushels short of the September estimate. The crop in Alberta has been placed at 134,150,000 bushels by the Department of Agriculture of that Province. This is about 36,000,000 bushels below the September estimate. No official revision for the Province of Saskatchewan has been received but a decrease from the earlier estimate is expected. These reductions, together with the damaged grain as the result of frost in some areas, may result in an effective supply of not much over 500,000,000 bushels in Canada this season.

DEMAND FOR WHEAT SLOW

The demand for North American wheat has been rather slow, although North American shipments since the first of August have been practically the same as last season. A larger percentage of these shipments, however, this season has been of Canadian wheat. The exports of United States wheat have, therefore, been much smaller than last season and for the first four months of the current season totaled only 65,000,000 bushels, including flour as wheat, compared with 112,500,000 bushels exported during the corresponding period last season when total exports, including flour, amounted to about 207,000,000 bushels. Mills have been fairly active buyers of high protein good milling wheat but there is a very limited outlet for the lower grades and discounts are rather heavy.

Marketing of Spring wheat in the United States have decreased somewhat and receipts of good milling quality are scarcely equal to current needs at this writing, November 10. Premiums have held quite firm, No. 1 Dark Northern 14 per cent protein was selling November 9 at Minneapolis at 18-24 cents over the December price of \$1.10½. This is 6-12 cents above the prices of Canadian wheat at Winnipeg where No. 1 Manitoba was quoted November 9 at \$1.22½.

An active milling demand for highly colored Amber Durum of high protein content has held the market fairly steady for this class. The lower grades, however, are slower sale and continue to sell at heavy discounts under the best milling quality wheat. At this writing No. 1 Amber Durum or No. 1 Mixed Durum showing high color and testing 12 per cent protein is bringing 8-18 cents over the Duluth November price, which closed November 9 at 99 cents per bushel. Thirteen per cent protein was bringing as much as 13-25 cents over the November price and 14 per cent protein 25-40 cents over. No. 2 Amber Durum for export was quoted f. o. b. New York at \$1.25½. American Durum was quoted in Genoa at \$1.31½ and c. i. f. at Marseille at \$1.27½.

The demand for Hard Winter wheat has held fairly steady for good milling quality grain but lower grades are dull. Some of the lower grades have been taken recently for export, having been sold principally on sample rather than by grade. No. 2 Hard Winter 12 per cent and protein was quoted November 9 at Kansas City at the December price of \$1.09½ to 3 cents over. Thirteen per cent protein was bringing 6-9 cents over the De-



FARMERS MUTUAL WAREHOUSE COMPANY'S
ELEVATOR AT HELIX, ORE.

times in wheat exports at our Pacific Coast, as well as the Canadian western coast, have been remarkable. The growth of this trade on our western border has been one of the chief factors in bringing about some extensive developments and changes. Elevator capacity was naturally one of the first considerations to which those interested in the grain trade had to turn, and our states in the Far Northwest played an important part.

While the first direct reaction in this increase has naturally been felt most strongly by the terminal houses and those engaged in the grain trade in seaports, nevertheless, this expansion entails the necessity of enlarging the interior facilities also, since it is only by keeping the marketing machinery in the country sections at a required capacity and in efficient condition that the speed of the system as a whole can be maintained. One recent addition to the houses available in the West was the ele-

cember price. No. 2 Hard Winter for export was quoted f. o. b. New York at \$1.30%.

Soft Red Winter wheat continues to sell well above corresponding grades of Hard Winter wheat but premiums at the various markets are rather irregular. Offerings are limited and demand fluctuates with local conditions in the various areas. Mills are substituting low protein Hard Winter wheat for Soft Red Winter in many instances and this has materially restricted the demand for Soft White wheat from the Pacific Coast. At the close of the market November 9 No. 2 Soft Red Winter was quoted at St. Louis at \$1.41-1.45, Cincinnati \$1.38-1.40 and Toledo \$1.42½-1.43½.

More activity has been apparent in the Pacific Coast markets, particularly at Portland where a better demand from European buyers has developed. The volume of trading, however, is relatively small as holders are not selling freely at current quotations. Marketings have been somewhat influenced also by unfavorable prospects of the Winter wheat which has suffered from dry weather. The first heavy rains of the season were received in that area during the second week in November. Soft and White Western wheats were quoted November 9 at Portland at \$1.17 per bushel. California markets have continued week with trading light and demand very limited. No. 1 Hard White wheat was quoted at San Francisco November 9 at \$1.26 and No. 1 Soft White at \$1.23 per bushel. No. 2 Hard Winter at Los Angeles was quoted at \$1.21½ per bushel.

Prices of native wheats in important European markets have fluctuated over a narrow range during the past month. Prices are about 2 cents higher than a month ago at Hamburg where native wheat of good milling quality was quoted November 9 at \$1.49%. Quotations were lowered about 2 cents at Paris where wheat suitable for milling purposes was quoted at \$1.61¼. Prices in Italy declined about 4 cents per bushel with native wheat at Milan quoted at \$1.84%. Wheat for December delivery at Liverpool was quoted November 9 at \$1.35 compared with \$1.38 on October 9. No. 3 Manitoba wheat for shipment by November 16 was selling in Liverpool at \$1.39 on November 9 and No. 4 Manitoba at \$1.33. New crop Argentine wheat was being offered in Liverpool at around \$1.33-1.34 per bushel.

RYE MARKET WEAK WITH WHEAT

The rye market turned weak with wheat toward the middle of October notwithstanding the moderate receipts and small domestic supplies. The best quality of rye has moved readily at steady prices for milling purposes but the demand for the lower grades is dull and export inquiry has been limited. Exports since the first of July have totaled only about 5,000,000 bushels compared with about 16,000,000 bushels shipped out to the corresponding time last season.

The world's rye crop is about 135,000,000 bushels smaller than last season, according to the trade and official estimates. Estimates for the countries which produced about 93 per cent of the world crop outside of Russia and China last season place their production at 878,197,000 bushels, or about 50,000,000 bushels over the 1927 harvest. The increase in these countries, however, is offset by a smaller crop in Russia estimated to be about 184,000,000 bushels less than last season's harvest.

Domestic demand has been somewhat below current offerings and stocks have increased to about 4,500,000 bushels compared with about 2,300,000 bushels in store a year ago. No. 2 rye was quoted November 9 at Minneapolis at 95 cents-\$1.02 and for export f. o. b. New York at \$1.12% per bushel.

CORN MARKET ON NEW CROP BASIS

While prices of corn at the various markets have declined to a new crop basis and the recent high premiums have mostly disappeared, the general market situation holds generally steady. A firmer tone developed during the week ending November 10 influenced by an active demand for the limited offerings and the delayed movement of new crop grain, as a result of unfavorable weather over important areas of the corn belt.

According to the November 1 estimate the 1928

corn crop will total about 2,895,000,000 bushels. About 54,000,000 bushels remained on farms at the first of November and about 2,000,000 bushels were in store in the markets, making a total supply of about 2,951,000,000 bushels, or about 43,000,000 bushels larger than last season's supply estimated at 2,908,000,000 bushels. The location of the 1928 crop is materially different from the 1927 crop, as there is an increase in production of 36 per cent in the corn belt states east of the Mississippi River but a decrease of about 14 per cent in the southern states. This will be an important factor in prices, particularly in the eastern states where they were unusually high last year because of the increased freight charges. Notwithstanding the relatively high prices and the uneven distribution last season, domestic consumption of corn appears to have been larger than for any year since 1924 and amounted to about 2,834,000,000 bushels. Exports totaled around 12,000,000 bushels. Should exports and domestic consumption this season equal that of last year the present supply would indicate a carryover at the close of the season more nearly the average of recent years.

The percentage of corn that is of merchantable quality this year is reported as 82.9 per cent as compared with 75.2 per cent a year ago and 80.7 per cent the 10-year average.

The foreign corn market situation is relatively firmer than a year ago. The crop in seven European countries reporting to date, including Rumania, Yugoslavia, Czechoslovakia, Bulgaria, Hungary, Italy and Switzerland, totals slightly less than 318,000,000 bushels, which is about 23 per cent smaller than last season's harvest in these countries. This smaller supply in Europe, together with the diminishing stocks of old corn in Argentina, which according to trade reports is about half the amount shipped out during the remainder of the season last year, has created an increased export demand for United States corn. No estimate is available of the amount of corn that has been sold for export but according to trade advices considerable amounts have already been contracted for shipment during December and January. Export bids November 9 were around 8½ cents over the Chicago price of 83½ cents f. o. b. gulf ports for No. 2 corn for November shipment. Export corn was quoted November 9 f. o. b. New York at 98 cents per bushel. Argentine corn was being quoted in Liverpool at \$1.20% but some new corn was also being offered for May shipment at around \$1.15¼ per bushel.

Industries and feeders have been the principal buyers of corn in the domestic markets and current offerings have been readily taken at steady prices. No. 3 White corn was selling November 9 at Kansas City at 85-88 cents and No. 3 Yellow at 83-85 cents per bushel. No. 3 Mixed corn was quoted at Chicago at 83¼ cents and No. 3 Yellow at St. Louis at 86-87 cents and at Omaha at 84 cents per bushel.

The oats market held practically unchanged during the month under review. Receipts were about equal to current needs and stocks in the markets have shown little change. No. 3 White oats were quoted November 9 at Minneapolis at 39¼-41¼ cents. Chicago 43½-44 cents and Kansas City 43-45 cents per bushel.

The barley market held generally firm during the latter part of October influenced by the premiums being paid for spot corn but since the first of November the market has weakened with demand dull for all but the best grades of malting barley. Exporters have taken more than 34,000,000 bushels since the first of July or more than twice last year's shipments for this period. Recently, however, demand from feeders and exporters has become less active and prices of feeding barley have declined rather sharply. The total 1928 barley production in countries which last year raised more than 80 per cent of the Northern Hemisphere crop, exclusive of Russia and China, is about 11.8 per cent above that for the same countries in 1927 and totals 1,378,793,000 bushels. Reductions in the estimates of the Roumanian, Australian, and Spanish crops, together with an increase in the earlier

estimate of the barely crop in England and Wales has resulted in net decrease of about 10,000,000 bushels in the total estimates for European countries reported to date.

Best malting barley was quoted November 9 at Minneapolis at 61-66 cents and at Chicago at 54-72 cents per bushel. Special No. 2 was quoted at Milwaukee at 68-76 cents per bushel and f. o. b. New York for export at 79 cents per bushel. Feeding barley was bringing 49-52 cents per bushel at Minneapolis and Chicago.

The flax market turned somewhat firmer during the month influenced by a steady demand for good quality flax and prospects of reduced supplies this season. The flax crop of 20,026,000 bushels is less than half of the amount used last season.

NEW CHARTER AND LADING BILL FOR OCEAN GRAIN

The "North American Berth Grain and Charter Party (1928)" and accompanying bill of lading, prepared by a special committee of the New York Produce Exchange, has been approved by the managerial board of the exchange, and is now effective.

The new form supersedes berth-term contracts drawn up previously to 1900, and applies to cargoes loaded at North Atlantic ports of the United States and Canada, and to the Gulf ports.

A form adopted in 1897 took the place of the "Cork for Orders" form, which was used in the days of sailing vessels, and which provided for lay days on the basis of one day for each load of grain, with an extra day for the total number of loads. The 1897 form provided for scale loading, and the Baltimore Form "C", which was adopted in 1913, cut down the number of lay days to five running days. The new form retains the five running day limit, but allows an additional running day for each additional 1,500 tons of cargo or part thereof in excess of 7,500 tons.

Clause No. 2 of the new form provides for the loading of any kind of grain except feed wheat and mahogany corn. Clause No. 5 gives the vessel the right, when the charterers have the privilege of a range of unnamed discharging ports, to insert in the bills of lading a provision that the vessel shall proceed to designated port of discharge, or as near thereto as she can safely get, always afloat. This provision is needed to cover the difficulty encountered at ice ports on late sailings.

Clause No. 9 provides that "Stevedore employed by vessel to be approved by charterers, or if not approved, reasonable objection to be given." The corresponding clause in the Baltimore Form "C" charter was a prolific source of dispute, as it provided only that the "stevedore employed by vessel to be approved by charterers." The charterers invariably claimed that this clause gave them the right to nominate the stevedore. It is clear, under the new form, that the vessel names the stevedore, and that the vessel's choice of stevedore can be set aside by the charterers only for some good and sufficient reason.

Clause No. 10 provides that if the vessel loads at a Canadian port, and is ordered to work-by the port authorities on Sundays, holidays, or after 11 p. m. on week days, that the extra expenses are to be borne equally by vessel and charterers. Clause No. 11 provides that prepaid freight, demurrage and dead freight are to be paid at port of loading in cash or by certified check before surrender of the bills of lading.

Clause No. 15 contains provisions in regard to deviation for bunkers, and Clause No. 16 provides that riots, civil commotions, strikes and lockouts are to be considered exemptions to claims for demurrage, but that strike or lockout of the shipper's men shall not be a bar to claims for demurrage if substitutes could have been obtained by the use of reasonable diligence at the rates current before the strike or lockout. Clause No. 17 provides for compulsory arbitration. The clauses respecting tender and readiness to load and discharge have been altered to keep pace with the latest judicial interpretations of the corresponding clauses of the old charter party forms.

NEWS LETTERS

NEW YORK
C. K. TRAFTON - CORRESPONDENT

A DECISIVE forward step toward the inauguration of the much discussed "over-the-counter" securities market on the New York Produce Exchange was taken by the Board of Managers at their meeting on November 7. This consisted of the adoption of trading rules and the adoption of by-laws and rules governing the Produce Exchange Stock Clearing Association. Accompanying the copies of the rules which were distributed to the members was an illustrated pamphlet containing interesting information regarding the exchange and summarizing the proposed new market.

Edward S. Westbrook, one of the vice-presidents of the Bartlett Frazier Company of the Chicago Board of Trade, was among the visitors on the New York Produce Exchange late in October.

Thomas Bennett of James E. Bennett & Co., commission merchants on the Chicago Board of Trade and other markets, was elected to membership in the New York Produce Exchange at the early November meeting of the Board of Managers.

Harry N. Hedges, for several years identified with shipping and freight brokerage houses on the New York Produce Exchange, latterly with Caldwell & Co., is now associated with the Bunge North American Grain Corporation, having charge of their freight engagements.

Thomas A. Crerar of the Grain Growers Export Company, Ltd., grain merchants, has been elected to membership in the New York Produce Exchange.

Reports regarding the steadily improving prospects for an early opening of the market for trading in "over-the-counter" securities on the New York Produce Exchange resulted in the submission of applications for membership from the following representatives of firms dealing in such securities during the past month: Samuel J. Feldman of Feldman, Gordon & Co., Jeffrey F. Granger of Sulzbacher, Granger & Co., J. D. Zimmerman of Phelps, Fenn & Co., William F. Ross, Jr., and Robert J. Chosak.

Henry D. McCord of H. D. McCord, Inc., grain merchants, who recently resigned his regular membership in the New York Produce Exchange, has applied for admission to associate membership.

During the greater part of the past month trading in tickets of membership in the New York Produce Exchange was inactive, which was probably owing largely to the delay in the opening of the new securities market, and the latter also accounted, no doubt, for the slightly easier tone which prevailed for awhile. Later as the prospects became brighter for the opening of the new market trading became more active and a steadier tone developed. At this writing a better demand and still higher prices are expected owing to the publication of the trading rules for the securities market by the Board of Managers. Regular memberships sold during the month between \$16,800 and \$17,300 and holders are now firm at \$17,000. Associate memberships were more active and firmer. Late in October a sale was reported at \$12,700 with advances within a short time to \$12,900, \$13,100, and \$13,300. A good demand is now reported at \$13,500, but there appears to be nothing for sale below \$14,000.

In anticipation of an early opening of the new securities market on the New York Produce Exchange the following representatives of stock and bond houses have become members, having been admitted at the early November meeting of the Board of Managers: D. F. Bernheimer of Steelman & Berkin; Clarence J. Blaker of Morrison & Townsend; Leonard M. Blancke of Hemphill, Noyes & Co.; Kenneth B. Day of D. W. Hewitt & Co., Inc.;

Milton A. Diner of Wyser & Diner; Charles E. Judson of C. E. Judson & Co.; Edward O. McDonnell of G. M. P. Murphy; Arthur Isaacs; Bany Levy; Reginald G. Reilly; and Max Sondheim.

Frederick L. A. Oettinger, well known on the New York Produce Exchange for about 20 years, is now connected with the Bunge North American Grain Corporation, having charge of their operations in grain options.

Charles F. Kintzel, refinery superintendent for Spencer, Kellogg & Son, Inc., has been elected to membership in the New York Produce Exchange.

Adrian P. Van Stolk, associated with G. Schilperoort, grain merchant on the New York Produce Exchange, was admitted to membership by the Board of Managers at their early November meeting.

LOUISVILLE
A. W. WILLIAMS - CORRESPONDENT

THINGS are looking a little better to the grain and elevator industry of the city. Now that the election is over business is expected to settle down, with indications of a long period of prosperity. Herbert Hoover's election was by a very popular majority in Louisville, and Kentucky, the state which switches from one party to the other, showed a vast landslide for Hoover, giving him the largest majority that has ever been polled for a president in Kentucky.

Conditions out in the state look more favorable. Corn is of exceptionally good quality this fall, and has been moving in earlier than usual, resulting in more money moving to the farmers. The tobacco crop is also of exceptional quality and about one-third larger than that of last season, with indications of good prices. Corn and tobacco are the money crops in Kentucky and with good values for these two commodities the rural section of the state should be in much better general condition. Tobacco sales over loose leaf floors will start in late November and early December. The markets are almost bare of old tobacco, and manufacturers have been buying such supplies as free lance brokers have had on hand, at considerable increase over spring values, due to increased consumption, and need of more old tobacco.

At the Kentucky Public Elevator Company, it was reported that daily handlings had improved somewhat, while the company has good stocks of long time storage grain in hand for customers, while it is also a season when the company gets busy with corn drying.

Fall wheat planting is reported to have been rather larger, and there was a very good demand for seed wheat, due to the old seed stock having been frozen out last winter.

Prices at Louisville show No. 2 Red wheat at \$1.42 buying, with \$1.43 paid for No. 1, by local millers, while selling price is quoted at \$1.50 by grain handlers, through the Louisville Board of Trade. Corn is quoted at 96 cents for new No. 2 White; 95 for Yellow and 94 for Mixed, selling. Oats are selling at 47½ cents for No. 2 new White oats; and 46½ for No. 3. Prices on hay, on arrival, baled, carlots, as quoted by Oscar Farmer & Sons, show hay on track, No. 1 Clover, \$20 a ton. Hay shipped in by river is quoted at \$1 a ton under rail hay, account of extra handling costs.

Fred Borries, vice-president of the Ballard & Ballard Company, Louisville, has recently purchased a home in Cherokee village, at a reported price of \$40,000, having traded in his old home on Third Avenue, at \$20,000 in the trade.

An editorial comment was in a local paper a few days ago, regarding an article in a western farm journal, with reference to Timothy hay slipping badly in the West due to farmers going to Alfalfa, Clover and other legumes. The article went on to say that while much more Clover and legume types

of hay were grown in Kentucky in connection with the rapidly increasing dairy business, the horse breeding industry, for racers or thoroughbreds would result in Timothy always being grown freely in Kentucky. Jap clover and Alfalfa have come forward with leaps and bounds in Kentucky, where there are more soya beans and cow peas grown each year.

There has been very material increase in the dairy industry of Kentucky, and some counties are now free of scrub stock. Bankers and business men are promoting the full blooded type of sheep, pigs and cattle. Many milk or cream and butter plants have been established, one cheese plant is running and another under construction, and it is reported that Armour plans two cheese plants in Kentucky. Arguments are made that grass pasture is available many more months of the year in Kentucky than in some of the Northern States, and that dairy products can be produced more cheaply in Kentucky.

The famous old Taylor & Williams distillery, at Gethsemane Station, Kentucky, was recently dismantled and shipped to Windsor, Can., where it will be set up and placed in operation, where it will probably produce a lot of beverage for Americans, whereas thanks to Mr. Volstead, it was a white elephant as long as it remained in Kentucky. George M. Roberts, who had been distiller for the company, has gone to Windsor, where he will be distiller in the new plant. A number of former Kentucky distilling plants have been dismantled and set up in the Dominion, where of course they are using grain, but not Kentucky and central western grain that helps Kentucky grain handlers any.

A hole in a sack left a small but easily followed trail from the feed stores of W. E. Hess & Co., 1234 West Broadway, to a stable at the rear of 1216 West Broadway, where Ben Hughes, 45 years of age, was arrested for feeding a team of mules on stolen provender, by local police. He was booked on charges of grand larceny and store house breaking, and probably won't feed any more mules for a long time.

C. S. Shartzler, feed dealer at Leitchfield, Ky., is owner of a mare, which he believes is about the oldest in his section of the country, the old lady having passed her twenty-eighth birthday last spring, and still being hale, hearty and able. Her owner claims that she is just as playful as a kitten, and seems to take pride in pulling a heavy one-horse load from the station to the store, a distance of a mile, which, however, is over a good road. She is only used for short hauls on hard roads.

ST. LOUIS
FAIRMOUNT - CORRESPONDENT

THE exporters of grain in this market are complaining of the treatment accorded them by the barge line during the past month. In October only five barges were furnished for grain transportation while 25 could have been readily used. It develops that the barge line is doing an immense business mainly in merchandise and other high class freight refusing to give the grain men facilities when this higher class freight is offered. Primarily the barge line was intended to offer cheaper transportation of grain for the benefit of the growers of grain in this territory but apparently this has been overlooked in the scheme as so much high class freight is offered they are giving this the preference to the detriment to the grain interests here. It is promised that within a year they will have 19 more barges but this does not clear up the situation here. Grain is standing on tracks awaiting unloading facilities to the elevators due to lack of outlet via the barges.

F. H. Kiddle, president of the Pioneer Flouring Mill Company of Island City, Ore., was a visitor here on October 22. His firm is a large shipper

of grain and flour to this market and is well known to many of the members. Mr. Kiddle left on a business trip throughout the East.

The Mississippi Valley Association representing the Mississippi River interests will hold a convention here on November 25 and 26. A large delegation is expected.

Receipts of wheat, corn and oats in St. Louis are showing gains every month over previous years.

Tilghman A. Bryant, familiarly known as "Tillie" was very unfortunate during the last week. In his absence from his office some passerby stole his overcoat. It has not been recovered up to date.

Jacob Schreiner has just passed the ripe age of 74 years. Mr. Schreiner is one of the outstanding members on the Merchants Exchange. He is much younger in general appearance than many men 35 years younger in age. He is alert and active as a much younger man. His voice is clear and rings like a bell in the pit and is often heard above the tumult. Mr. Schreiner is one of the oldest members here, joining the Merchants Exchange on January 3, 1882. He is the proud father of four sons all members of the Chicago Board of Trade and active in the grain market there. The names of his sons in Chicago are Jake, Frank, Charles and Joe, who are all very prominent in that market. We hope to have Jacob Schreiner with us for many years.

The following were noted among the visitors during the past month: F. X. Murphy, of Lawrenceville, Ind.; J. McCook, Pine Bluff, Ark.; Dr. M. Condo, of Kurashike, Japan; B. D. Wilson, of Johnson City, Tenn.; E. J. Robert, St. Joseph, Mo.; Howard Jackson, H. C. McCauley, Irving Miller, of Chicago; and W. P. Connor, formerly a member here but now located in Minneapolis.

Now that the election is settled and gone by we look forward to renewed activity in the grain trade. While many were disappointed in the results everyone seems to have confidence in the President-Elect and we believe no interference in the grain trade will be brought about.

MILWAUKEE

C. O. SKINROOD - CORRESPONDENT

WHAT'S the big news in the grain business of Milwaukee? By all odds the most welcome bit of information of the local grain trade is that of the tremendous tide of barley marketing for this center. For last month the record shows that Milwaukee had 2,110,000 bushels of barley offered here, as against only 1,208,000 bushels for the corresponding month of last year. Wheat trade is not a very important item at Milwaukee as a rule, but for last month the showing was materially improved, the total being nearly 650,000 bushels as compared with only 211,000 bushels for the corresponding month a year ago. Oats and corn trade, however, do not make such pleasant reading for the grain trade. A genuine surprise in the monthly grain report was that of rye which came booming in with a statement of 548,000 bushels received as against only 66,000 bushels marketed for the corresponding week a year ago.

Milwaukee grain men are largely unanimous in believing that there are large amounts of grain back in the country and that these are bound to come to market sooner or later. Therefore, it is argued that the small supply is merely a temporary thing that will speedily be remedied probably in most of the leading grains.

Secretary Plumb has compiled a table of unusual interest showing the receipts for the last year and especially since the new crop began moving to market. These figures indicate that the local trade had more than a 4,000,000-bushel gain in receipts. The total figures make more than 21,000,000 bushels this year as against 17,300,000 bushels approximately for the previous year.

Charles G. Middleton is among the new members recently elected to the Milwaukee Chamber of Commerce. He is manager of the Milwaukee branch of Harry H. Field of Chicago.

The supplies of grain in Milwaukee are steadily piling up in some lines at a season of the year when trading is relatively the largest. The supply of corn at the opening of November was, however, down to 46,000 bushels, wheat is piling up at the Milwaukee market with a total of 1,225,000 bushels. The oats supply is just moderate, with storage of

634,000 bushels. The barley holdings are not as large as expected in view of the large receipts—only 703,000 bushels. Rye holdings were also tending to accumulate with 520,000 bushels, the largest amount for a number of months.

The Milwaukee interest rate on advances has again been fixed at 6 per cent, the rate which has prevailed for a long time.

Tom Doyle, once a wealthy grain dealer here, is dead of pneumonia. Mr. Doyle died at the age of 80 after spending between 50 and 60 years in the grain business in Milwaukee and in a number of other cities in the Middle West.

The Milwaukee grain board decided to close for the day following Armistice day since the Armistice holiday fell on Sunday. Milwaukee usually follows Chicago in the matter of closing for holidays. The Milwaukee Chamber also closed for Columbus day, as was done in Chicago.

DULUTH

S. J. SCHULTE - CORRESPONDENT

WIDESPREAD expressions of satisfaction were heard among operators on this market over the election of Herbert C. Hoover as President of the United States. The President-elect is personally known to many operators on this market through his visit at the home here of Julius H. Barnes on his return from Belgium. He was a partner with Mr. Barnes in some business enterprises, and it is assumed in trade circles here that he has obtained a deep insight into the various phases of marketing wheat and other grains through the regular exchanges.

The Bunge North American Grain Corporation of New York has established an export agency on this market in charge of C. H. Peterson. Carlos Falk is president and Robert F. Straub, vice-president of the organization. It is expected to prove valuable in developing export trade on this market through arousing wider competitive interest in that department. The Duluth Board of Trade membership of C. H. Smith has been transferred to Mr. Peterson and the membership of A. Hansen to Mr. Straub.

The Board of Trade membership of C. M. Harrington has been transferred to J. B. Gilfilian, president of the Van Dusen-Harrington Company. F. G. Winter of the Winter, Truesdale, Diercks Company of Minneapolis has been elected a member of the Duluth Board of Trade.

Vessel interests here have experienced one of the most trying grain handling seasons. After breaking down to 1½ cents a bushel Buffalo delivery early from the Head of the Lakes the rate stiffened up to a peak of 4½ cents around the end of October. Shipping agents were then seeing visions of 5 cents but everything was upset by an announcement during the first week of November that many of the big iron ore carriers would enter the grain trade at the close of their season around November 15, and the rate has been cut to 3½ cents at this writing. Charters to include winter storage had been made at 7 cents, and the rate has been slashed a cent also. No rates are being quoted to Georgian Bay ports or to Montreal on account of congestion at those outlets and the prompt despatch clause being insisted upon by vesselmen.

Due to a falling off in receipts from the country buyers for the mills have been bidding up sharply during the last month for the better grades of protein Spring wheat. It is to be noted that fancy Spring wheat has been marked up a maximum of 7 cents premiums at the tops. The Durum wheat basis, however, stands at approximately the same as a month ago.

The outlook for the end of the season shipping from the Head of Lakes is regarded by elevator and commission men on this market as the most gloomy in several years. It has been noted that foreigners have been coming into the American markets for meager lots of grain with Durum Wheat featuring to some extent from this market. Stocks of all grains in Duluth and Superior elevators as on November 9, aggregated nearly 30,000,000 bushels including 25,000,000 bushels of wheat. A comfortable feature as far as elevator interests are concerned is that the Buffalo and other eastern mills have contracted for considerable boat space here and it is hoped that congestion will be relieved to an appreciable extent from that quarter. The outcome is thought to hinge mainly upon the extent of charterings for space on the big grain

carriers to include winter storage, and to be loaded before the close of navigation. Operators mention that the houses here are crowded up after taking in around 34,000,000 bushels of grain though their gross capacity is rated at over 41,000,000 bushels taking into account the space afforded through new additions at the Great Northern and Itasca Elevator systems. With that capacity it was figured that the houses should be able to store 36,000,000 bushels of grain but provision for separations of grades cut into elevator storage capacity figures this season.

Members of the Duluth Board of Trade will vote on November 20 upon a proposal to incorporate an addition to its rules and by-laws to provide for a nominating committee. The change is motivated by a desire to eliminate any criticism as far as possible regarding the personnel of the board's directorate or members of committees. The added rule reads as follows:

Section 4—At least thirty days before the annual election it shall be the duty of the President to present to the Board of Directors for ratification the names of five members of the association, who shall constitute a nominating committee. The various branches of business transacted on the exchange shall, so far as practicable, be represented on the committee, and officers and directors shall not be eligible for appointment on the committee. It shall be the duty of the nominating committee to post in the exchange room, at least ten days prior to the annual election, a list of candidates for the elective offices, which said list shall consist of two candidates for president, two candidates for vice-president, and two candidates for each of the vacancies occurring on the board of directors, the board of arbitration and the board of appeals. Any vacancy occurring in the list of nominations may be filled by the nominating committee. Nominations may be made for any office by petition signed by twenty-five members of the Association and filed with the Secretary at least five days before the annual election and the name of any candidate nominated by petition shall be placed upon the same ballot as those nominated by the nominating committee. No member shall sign a nominating petition for more than one candidate for each of the elective offices to be filled.

If a vacancy shall occur in any office which under the rules is to be filled at a special election, the nominating committee which named candidates for the preceding annual election shall, at least five days before the said special election, post the names of two candidates for each office to be filled, and nominations may be made by petition in the same manner as at the annual election, except that it shall be sufficient to file said petition with the Secretary three days before the date of said special election. The candidates chosen by the nominating committee and those presented by petition shall be printed on the same ballot.

Exporters on this market have been experiencing a steady eastern inquiry for rye, but they have been unable to take on any amount of business for the reason that stocks of contract rye are light. Ergott rye is a drug on the market and buyers have been demanding wide discounts in taking it in some cases.

As a result of curtailment in lumbering operations and raising of supplies last season in the districts they have been operating in; operations in the hay market here have fallen away to a minimum according to R. M. White of the White Grain Company. He expressed satisfaction over the steady growth in the feeds trade on this market brought about through the phenomenal expansion in the dairying interests. The market in feeds has been strong all this fall.

BUFFALO

ELMER M. HILL - CORRESPONDENT

BUFFALO is in need of more fire tugs to give better fire protection to the millions of dollars invested in grain elevators and other waterfront property. This conclusion was reached after a disastrous fire which did approximately \$2,000,000 damage to freight houses of the Detroit & Cleveland Navigation Company, and the Lackawanna Railroad on the waterfront.

The will of Henry C. Moffatt, pioneer miller and grain operator in Buffalo, provides for an estate of \$1,002,202, which is distributed between the widow and children.

Competition among boat owners on the New York State Barge Canal for grain cargoes to the Atlantic seaboard has forced a reduction in the rate from 6½ to 6 cents with a possibility that it will go lower before the close of navigation. With upwards of 100 canal boats at Buffalo awaiting grain cargoes early this month, shippers were offering but 5½ cents but boat owners were getting charters at 6 cents. Reports in local grain circles say that free storage was being offered by certain rail interests at some of the Eastern ports, particularly Philadelphia to induce grain shippers to use the railroads instead of the state waterway. Efforts were being made by canal interests to

verify these reports so as to form the basis of an appeal to the Interstate Commerce Commission, if they proved correct.

Cargoes for early loading were being offered more freely in the Lake Superior grain trade early this month but chartering was not very active. Some small boats were played to take cargoes at Duluth for Buffalo at 4½ cents with space in the elevators guaranteed and good dispatch at both ends of the route. Larger boats are getting 4½ cents from Fort William to Buffalo. Very little tonnage has been lined up for the last half of November. Storage cargoes are being offered to load at the Head of the Lakes during the latter part of November to hold at Toledo, Fairport or Erie at 6 cents. Grain carriers have lost considerable time at Georgian Bay ports and unless there is an immediate increase in available car supply, few boats will take loads consigned to that region. Some boats were held at Tiffin for as long as five days.

Terminal elevators at Buffalo early this month were rapidly being clogged with grain and were close to full storage capacity. There is danger of a congestion with consequent delay to grain boats which are anxious to get in as many trips as possible before the close of the Great Lakes season of navigation. The forwarding movement from Buffalo to the Atlantic seaboard has not been very active this fall and with grain being received at the rate of almost 2,000,000 bushels daily, conditions at Buffalo elevators are not as bright as they have been for several years.

About 75 salesmen of the Ralston Purina Company from New York State and the New England territory held their annual sales conference at the Hotel Statler. William Sample of St. Louis, vice-president in charge of sales, was one of the principal speakers. Mr. Sample has 900 salesmen under his direct supervision and this is his twenty-fifth anniversary. William H. Danforth of St. Louis, president of the company, who was one of the guests at the Buffalo conference, reported that the company has just opened a new feed mill at Woodstock, Ont., and that ground has been broken in Denver for a new mill with a daily capacity of 1,000 cars.

Murphy & Hoffman, Buffalo canal brokers, have entered into a contract with the Cargill Grain Company, Inc., for the shipment via the New York State Barge Canal from New York to Buffalo of several cargoes of Pacific Coast wheat which arrived in New York on board the Steamer *Oriole*. It is expected that approximately 3,000,000 bushels will follow this shipment providing the wheat reaches New York before the close of navigation on the state canal. It is explained that the unusual operation became necessary by reason of the failure of the last Soft Winter wheat crop of New York State and Michigan.

Successful operation of the feed mill and new seed warehouse of the Eastern States Farmers' Exchange in Buffalo was commented upon by members of the Board of Directors of the organization who made their biennial tour of inspection through the property. Reports were presented at a dinner meeting held in the Hotel Buffalo at which Louis W. Deane of Waltham, Mass., president of the exchange, presided and spoke. John D. Zink, general manager, also was a speaker. The exchange is a co-operative purchasing organization with its mills in Buffalo. It consists of and serves 24,000 farmer members in New England, Delaware, Maryland and Pennsylvania with an annual business of \$10,000,000. The Buffalo plant handles 180,000 tons of feed and grain annually.

After checking up on the unloading of the Steamer *General Garretson* at the Great Eastern Terminal Elevator, announcement was made that the elevator beat all her own previous records in the time consumed for handling the cargo of Amber Durum wheat. The load of 364,682 bushels was unloaded in 14 hours. Each of the elevator's two marine legs averaged 13,050 bushels an hour. The Great Eastern Elevator is 27 years old, having been placed in operation in 1901. Walter Schonhart, superintendent, said he felt proud of the creditable performance of the elevator operating at such high speed.

The new 3,000,000-bushel Hecker Elevator at Ohio and St. Clair Streets, the newest addition to Buffalo's grain storage facilities, has been placed in operation. A test cargo of 115,000 bushels of wheat and corn was run through the new house in quick time. The new Hecker Elevator is operated by the Hecker Elevator Company, Inc., of which A. P. Walker, president of the Standard Milling Company of New York, is president. J. A. Sim, president of the Hecker-Jones-Jewell Company, of New York is vice-president and J. A. Neville of New York is secretary and treasurer. Charles H. Williamson of Buffalo is the manager of the new elevator. The elevator is of steel and concrete

and has 1,600 feet of dockage space. It is equipped with two marine legs, a drier, cleaner and clipper. Elevating capacity will approach 50,000 bushels an hour, while car loading facilities are estimated at the same figure.

Shipments of grain from Buffalo to Montreal via the Canadian waterways route have increased slightly this month and it is freely predicted that the movement of grain through the Welland Canal this season will establish a new high record. With reports of grain congestion in the Welland Canal,



GRAIN DEALERS AND MEMBERS OF THE BUFFALO CITY COUNCIL INSPECTING BUFFALO HARBOR

the Dominion Government has issued a summary showing Canada has 4,558 grain elevators with a total storage capacity of 248,818,200 bushels. Country elevators number 4,439 with a capacity of 146,639,000 bushels and terminal, manufacturing and private elevators number 119 with an aggregate capacity of 138,179,000 bushels.



RECENT rains and snows throughout the state have put Winter wheat in excellent shape for the winter months. This same wet weather also put corn fields and roads into such bad shape that very little corn could move to market and as a result cash corn prices in Omaha had a very sharp advance. Good weather the past few days has helped the situation somewhat, and heavier receipts and somewhat lower prices are looked for this week. Wheat premiums have also advanced, especially on high protein wheat. There has been a good demand for Durum and premiums are holding firm, although they have not advanced. The oats market has been dull, with receipts light and demand just fair at prevailing levels.

It was announced a few days ago by the Union Terminal Railway Company of St. Joseph that they will let contracts at once for the construction of a new terminal elevator at that point, to have a capacity of 2,500,000 bushels. This new plant will be leased and operated by the Trans-Mississippi Grain Company of Omaha, one of the leading grain concerns in the country. This company already operates a 1,000,000-bushel terminal at St. Joseph, one of 800,000 bushels' capacity at Burlington, Iowa; and two with a combined capacity of 1,750,000 bushels at Omaha, besides a line of country elevators.

The concrete storage tanks of the new Illinois Central Elevator in this market have been completed and piling is now being sunk for the workhouse. This phase of the construction should be completed this week, and it is expected that foundation work will be well under way by the end of next week. This new plant is to be operated by the Crowell Elevator Company.

Many of our members spent a day or two hunting pheasants during the recent 10-day open season in several Nebraska counties. Good duck-hunting both along the Platte River and in the sandhill lakes has also been responsible for a good many absences.

At the annual caucus held Wednesday, November 7, the following were nominated to run for the places of three directors, whose terms will expire this year: J. A. Linderholm of the Crowell Elevator Company, C. H. Wright of the Nebraska-Iowa Grain Company, M. I. Dolphin of the Dolphin-Jones Grain Company, Chauncey Abbott of the Omaha

Flour Mills Company, and Dan Jewett of the Rocky Mountain Grain & Commission Company. The annual election of the Grain Exchange will be held Wednesday, November 14. The directors whose terms expire are M. I. Dolphin, Chauncey Abbott, and O. E. Harris, present president of the exchange.

Newcomers on the trading floor are R. W. Sage, now managing the consignment department of the Trans-Mississippi Grain Company, and C. J. Aller, in the wheat department of the Butler-Welsh Grain Company.

H. A. Butler of the Butler-Welsh Grain Company is at present hunting deer in Wyoming. A few years ago, Hugh returned from one of these expeditions with a moose to his credit and to prove his story. He had the head mounted and hung in his office.

Among those who have announced their intention of journeying to New York for the Army-Nebraska football game November 24 are J. L. Welsh of the Butler-Welsh Grain Company, James Trimble of the Bell-Trimble Grain Company, and Robert Scoular of the Scoular-Bishop Grain Company.

MINNEAPOLIS

ALBERT W. MORSE CORRESPONDENT

FROST damage to wheat which was received at Minneapolis during the latter part of September and during October, exceeded the usual amount, and dockage caused by seeds, wild oats and other waste was abnormally heavy during that period. This is shown by the daily reports of the licensed grain inspectors working under R. C. Miller, grain supervisor in charge of the Minneapolis Federal grain supervision district. About 15 per cent of the wheat of all classes received during October was graded smutty, and this included around 19,400 cars. Of the 2,589 cars of Durum and Mixed Durum graded during October, 850 cars were found to be smutty. A large discount on rye was caused by the fact that 555 cars of the 934 received in Minneapolis during October were graded ergoty. The general quality of corn received during October was better than normal. The bulk of this corn ranged between 17 per cent and 21 per cent on the moisture test, the outstanding grading factor, placing this crop very largely in classes 3, 4 and 5. As a general case, the test weight of the October corn receipts showed from 52 to 53 pounds. Damage to corn was not a factor.

Banner Grain Company expects that its new 1,052,000-bushel elevator on Twenty-ninth Street between Tenth and Eleventh Avenues, Minneapolis, will be ready for use by the first of December.

Country elevators are holding their own, with a small gain, but the storage problem is serious. O. H. Ulring, W. C. Mitchell Company, analyzes the situation in this way, "May wheat is selling at a high premium over December, and the fact that the country elevators are now selling wheat, which has been stored with them, on the basis of December, this same wheat to be eventually bought from the growers on the basis of May, is liable to result in a loss, as the trading basis will no doubt then have the same relation to the May future as it has to the December at the present time. Under such conditions as exist today, we strongly advocate that stored wheat be not shipped out by the country elevator only as the space is absolutely required."

At its meeting of October 18, the Board of Directors of the Chamber of Commerce of Minneapolis approved the following measure, "Effective on and after November 1, 1928, the minimum interest rate to be charged on all advances or loans made to all non-members of this association who are shippers of grain or seeds to this market, shall be 6½ per cent. Effective on and after November 1, 1928, the maximum interest rate to be allowed on all credit balances of non-members of this association who are shippers of grain or seeds to this market shall be 5 per cent."

A traveling representative's license has been granted by the Chamber to Geo. M. Bushwell, Halset & Carey Company.

Heavy barley shipments from this area is noted in the "Monthly Review of Agricultural and Business Conditions in the Ninth Federal Reserve District," issued under date of October 29. Comment is that "grain began to move later this year than a year ago and has been hindered by congestion at the head of the lakes, where the high percentage of

dockage in wheat retarded the handling of incoming grain. A feature of the grain movement this year is the heavy outward movement of barley which is fortunate inasmuch as the barley crop in the Northwest is of record size."

The Barnett & Record Company is doing some re-decorating in its Flour Exchange office.

Mr. Brakke, manager, Farmers Elevator Company, Cylinder, Iowa, was in Minneapolis on November 9 attending to the purchase of new equipment costing from \$1,200 to \$1,500, including an overhead drive. Mr. Brakke was accompanied by State Senator Breckenridge, one of the directors of the elevator company.

D. P. O'Neill, chairman, Minneapolis Board of Grain Appeals, expected to return on November 13 from a trip to his farm near Thief River Falls, Minn. Mr. O'Neill's crop felt the general condition of deterioration which affected grain as a result of the wet weather in the early part of the season, causing some grain to sprout in the shocks, and creating a reduction of from one to two grades.

C. C. Crellin was appointed a member of the Transportation Committee at a meeting of the Board of Directors of the Chamber on November 8, taking the position left vacant by the resignation of C. C. Bovey.

INDIANAPOLIS

H. M. RUDEAUX CORRESPONDENT

THE Indiana wheat crop looks very good in all parts of the state, according to information from reliable sources. Recent rains and favorable weather have helped matters along. With the proper protection during the winter months furnished the fields with an abundant snowfall there will be a good harvest. One of the things not to be overlooked is the amount of certified seed sown this fall, which is partly responsible for the present excellent condition of the fields. It has been estimated that not less than 75 per cent of the normal acreage has been planted.

New corn is making its appearance on the Indianapolis market and as many as 100 cars a day are arriving. Indiana corn is not up to expectations, inasmuch as it is carrying a large percentage of moisture, and is very light in weight. Illinois corn coming to Indianapolis is somewhat superior to the Indiana arrivals; it is heavier, low in moisture and shows practically no damage content. Arrivals from the southern part of the state are superior to those arriving from the north, they are of better quality but not equally as good as Illinois arrivals. Some of the grain merchants are rather disappointed in the quality of Indiana corn, however, it might improve as the winter comes on.

Early arrivals sold at fancy premiums but since the usual heavy movement, which is considered rather early, premiums have vanished. The demand while good, is nothing to brag about, and continues steady. The bulk of arrivals are grading No. 4 and No. 5 due to moisture. The damage is less than 1 per cent, but later cribbing might cause more damage. At present No. 4 Yellow is selling at 74 cents Illinois points, other grades on their merits.

There is a fair demand for good heavy No. 3 White oats testing around 34 to 35 pounds, while other grades are selling at wide discounts and are hard to dispose of. The demand is not pressing, but good quality oats are readily disposed of.

Indiana millers are paying \$1.30 for good Soft wheat grading No. 2 Red, with the low grades moving very slow at heavy discounts.

The Wheat Improvement Committee headed by Edgar H. Evans of the Acme Evans Company of Indianapolis, are co-operating with other Soft wheat growing states, trying to arrive at some definite program to follow, in order to improve the quality of Indiana wheat, according to Charles B. Riley, secretary of the Indiana Grain Dealers Association.

Contemplating establishment of a permanent home office in Indianapolis, the Grain Dealers National Mutual Fire Insurance Company, purchased the property at the southwest corner of Eighteenth and Meridian Streets. James J. Fitzgerald, secretary and general manager of the insurance company, which has been in existence for 27 years, with home offices in Indianapolis, said that his company did not contemplate making any radical changes in the present building and that any

changes or additions which will be built will be along the same line of architecture. The company will move to its new quarters as soon as the lease on its present offices can be sold.

On October 30, 5,000 farmers and their friends attended the third annual Indiana husking contest held on the farm of Frank Adney, one mile northeast of Lebanon, Ind. Cecil R. Miles, Warren County farmer, won the contest with an average of 18.61 bushels in 80 minutes. Miles won first prize of \$100 in gold, and a gold medal.

The light and chaffy condition of the corn reduced the averages, and all marks were lower than those made by the same contestants in winning their county contests last week.

KANSAS CITY

MERRYL SCHWIND — CORRESPONDENT

A conference held at the Kansas City Board of Trade on November 9, steps were taken to solve the problem arising from what is considered by grain interests in this section as a too technical application of the Grain Standards Act. Following threats of the grain shippers to demand a repeal of the act because of lack of uniformity and inconsistency in applying grades on damaged wheat Secretary Jardine called the meeting attended by more than 100 representatives of farm and grain organizations in this territory. A. J. Besley, chief of the grain standards division at Washington, was in charge of the meeting. The issue is the grading of bleached wheat. It was explained that heavy rains in the maturing and harvesting period left wheat in a bleached condition. A part of the crop that was placed in shocks and stacks and some of the grain harvested with the combine was rain soaked, with resulting damage from must, straw and ground odor. The contention is that while musty wheat is heavily discounted in price due to its inferiority as milling wheat, the Grain Standards Act, as interpreted at present, puts wheat that has only a straw or ground odor in the musty classification. However, a straw or ground odor does not lessen the commercial value of the wheat for milling purposes. The result of the strict application of the Federal grading system has been to decrease the price to the growers from 10 to 15 cents a bushel. Musty wheat is graded No. 5, while wheat with only a straw or ground odor may grade as high as No. 2 with specifications of this damage which may be removed by terminal elevator and mills in reconditioning processes.

Farm representatives charged that the heavy discounts of so-called damaged wheat was caused by the attitude of the milling interests who asserted that such grain could not be milled as the odor was carried on into the flour. They state on the other hand that the odor does not survive the milling process, and in no way affects the quality of the manufactured product. The result of the meeting was the appointment by the Department of Agriculture of a committee from 19 representative organizations of the Southwest to aid in the solution of the problem. These organizations will have representation on the new committee: Kansas State Agricultural College, Kansas Grain Dealers Association, Kansas State Grain Inspection Department, Southwestern Millers League, Missouri Inspection Department, Kansas City Board of Trade, St. Louis Merchants' Exchange, Salina Board of Trade, Wichita Board of Trade, St. Joseph Board of Trade, Kansas Co-operative Wheat Marketing Association, Kansas State Department of Agriculture, Hutchinson Board of Trade, Kansas Co-operative Elevator Association, Farmers Union, Omaha Grain Exchange, Port of New Orleans, Port of Galveston, Port Arthur. The following men spoke at the meeting: John Vesecky, president of the Kansas Co-operative Wheat Marketing Association, Thad L. Hoffman, president of the Kansas Flour Mills Company, Charles W. Lonsdale, president Simonds-Shields-Lonsdale Grain Company, T. B. Armstrong, assistant chief Kansas State Grain Inspection Department, J. S. Hart, former Kansas chief grain inspector, and C. C. Isely, Dodge City, Kan., a grain man. The first meeting of the committee will be held in Kansas City at an early date.

Mrs. Cecelia Ismert, widow of Theodore Ismert of the Ismert-Hincke Milling Company, died in Kansas City on November 2. She was a member of a pioneer family in Kansas City, Kansas, and born in that city in 1867. She leaves three sons and a daughter.

Three floors of the Standard Seed Company warehouse at 114 West Third Street, collapsed recently, and 1,000 bushels of assorted seeds landed in the basement. Apparently the third floor gave way first, taking the second floor and then the first. A

dust explosion followed the collapse. According to Andrew J. Sedlock, secretary-treasurer of the company, much of the mixed seeds can be used in seedling pastures. Repair work on the building has been started.

The home of Henry Lichtig of Henry Lichtig and Company, grain brokers of this city, was invaded by bandits recently, and Mr. and Mrs. Lichtig were forced to turn over jewelry and a fur coat valued at \$3,550. The holdup occurred at 7:20 in the evening, while they were preparing to go out. The jewelry consisted mainly of diamonds. Everything except the fur coat was insured.

Samuel F. Hinds, for 25 years in the grain business in Kansas City, has retired. Mr. Hinds plans to go to Fort Pierce, Fla., where he will engage in the real estate business. Mr. Hinds entered the grain business in this city in 1903 as a member of the firm of Hinds & Lint. More recently he operated as the Hinds Grain Company. His membership on the Kansas City Board of Trade is offered for sale.

The effective date of the interstate commerce commissioner's order cancelling transit privilege on grain shipments originating south of the Santa Fe railroad in Kansas has been postponed from October 25 to March 1. This change in date was the result of a protest by grain men, wheat growers and railroads, who believe the rate is not equitable and asked particularly that it not be put into effect until the present crop is disposed of. They hope before March 1 to convince the commission that the rate is a mistake. Grain men say that the cancellation of transit privileges would lower the price of wheat 5 cents per 100 pounds, since it would add that much to the transportation costs. Wheat grown in Kansas for export now is shipped to Kansas City for storage and treatment. It then is shipped to Gulf ports for export. Cancellation of the transit privileges would mean the rate from the point of origin to Kansas City and the rate from Kansas City to the Gulf must be paid in full. With the transit privilege in force a long haul rate was offered by the railroads from the point of origin to the Gulf, including permission to unload the wheat in Kansas City and reload it for a continuance of the journey to the sea.

Miss Austa Kidder, daughter of E. W. Kidder of Holden, Mo., formerly associated with his father here in the R. E. Kidder Flour Mills, died in this city October 28 from rabies resulting from a dog bite suffered seven weeks before. Miss Kidder was 19 years old. Mr. Kidder is now a member of the Holden Milling & Elevator Company of Holden, Mo.

An application for membership on the Kansas City Board of Trade has been made for James A. White of Lamson Bros., on transfer from Leslie F. Gates of Chicago, president of Lamson Bros., who died in Battle Creek, Mich., on October 18.

James F. Hughes has been elected to membership on the Kansas City Board of Trade on application from W. H. Marshall, who died recently. Mr. Hughes has been with the Marshall Commission Company for several years. Mr. Marshall was head of the company.

GRAIN NEWS FROM BOSTON

By L. C. BREED

The grain mill and elevator of Ryder & Warren at Belchertown, Mass., was almost totally destroyed by fire September 28. Upwards of 15 carloads of grain and a large stock of lumber were burned. The cause of the fire is unknown. The loss was estimated at \$50,000.

It is reported that the Canadian Co-operative Wheat Producers, Ltd., will use the Boston grain elevators this winter for the storage of upwards of 2,000,000 bushels of wheat for export to Europe, the elevator at Fort William being booked to capacity. This will practically fill the three grain elevators here.

The Grain Dealers Mutual Fire Insurance Company of Boston, of which Dean K. Webster is the head, has voted to change its name to Twin Mutual Fire Insurance Company. Milton L. Cushing is treasurer.

The demand for grain in New England during October was quite active and reached the proportions of the corresponding month last year in case of most of the dealers. Within a short time the sale of chicken wheat has virtually stopped, owing to the country trade stocking up with it last month at the low prices that prevailed. The sale of wheat feeds has been uneven. When the weather became unseasonably warm in October, the demand was quiet for prompt shipment, most of the inquiry being for deferred delivery. At the present time

THE AMERICAN ELEVATOR AND GRAIN TRADE

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there are no offerings of Canadian mill feed. It is reported that home mills in England are taking steps to grind Canadian wheat to a larger extent than usual, and in consequence Canadian mills with a smaller output of flour, will not have so much feed to dispose of this season.

The large silver loving cup, the trophy won by W. H. Mitchell, Jr., of Boston, at the golf tournament of the Grain Dealers National Association was recently exhibited at the Exchange trading room. This trophy was presented to the Association by the Boston Grain & Flour Exchange as a prize each year at golf tournaments until it has been won twice by the same man, when it becomes his property.

The receipts of hay have been fully up to the requirements of the market during the month of October at Boston. Prices have ruled fairly steady. The receipts for the month were 219 cars. Rye straw 11 cars.

The Boston seed dealers have been having a moderate demand for Winter rye for fall planting. Business in the booking of orders for grain and grass seed for delivery next season is reported to be excellent.

During the month of October exports of grain were as follows: To Liverpool, 72,000 bushels wheat; to Manchester, 16,000 bushels wheat; to Hamburg, 38,600 bushels wheat; to Hamburg, 95,000 bushels barley; to Rotterdam, 500 sacks oat meal.

Stocks of grain in regular elevators at Boston as of October 27, were as follows: Wheat, 598,792 bushels; oats, 27,313 bushels; rye, 2,514 bushels; barley, 246,671 bushels.

The receipts of grain at Boston during the month of October, as tabulated by the Boston Grain & Flour Exchange, were as follows: Wheat, 725,625 bushels; oats, 56,775 bushels; rye, 7225 bushels; barley, 348,650 bushels; malt, 3,225 bushels; mill-feed, 20 tons; cornmeal, 573 barrels; oat meal, 26,521 cases and 3,350 sacks.

Among the visitors to the Exchange during the month of October, outside of New England, were the following: Charles La Ferle, Toronto, Canada; P. E. Goodrich, Winchester, Ind.; G. M. Ross, Ottawa, Canada; Lawton Cavanaugh, New York City; J. H. Reid, Montana; Herbert H. Thompson, Sheridan, N. Y.; C. L. Beckenbach, Kansas City, Mo.; C. F. Lingham, Lockport, N. Y.; W. V. Hamilton, Caledonia, N. Y.; Le Roy W. Todd, Owosso, Mich.; L. A. Mennel, Toledo, Ohio; J. A. Fabet, Amsterdam, Holland.

OCTOBER RECEIPTS AND SHIPMENTS

BALTIMORE—Reported by Jas. B. Hessong, Secretary of the Chamber of Commerce.

	1928	1927	1928	1927
Wheat, bus..	2,629,521	1,112,601	660,354	755,102
Corn, bus...	54,175	26,226		
Oats, bus...	145,194	68,291		
Barley, bus..	1,347,780	605,998	1,321,287	608,712
Rye, bus...	3,521	36,832		25,974
Malt, bus...	29,522	14,648		
Buckw't, bus.	1,196			
Millfeed, tons	2,552	1,056		
Straw, tons...	15			
Hay, tons...	342	292		
Flour, bbls...	105,741	132,010	17,993	43,552

CHICAGO—Reported by F. H. Clutton, Secretary of the Board of Trade.

	1928	1927	1928	1927
Wheat, bus..	4,689,000	1,736,000	1,576,000	955,000
Corn, bus...	4,342,000	8,464,000	4,009,000	2,826,000
Oats, bus...	3,541,000	3,461,000	1,936,000	2,792,000
Barley, bus..	2,411,000	981,000	901,000	221,000
Rye, bus...	1,831,000	292,000	51,000	239,000
Timothy Seed, lbs.	3,164,000	3,741,000	1,815,000	3,009,000
Clover Seed, lbs.	3,125,000	2,285,000	865,000	730,000
Other Grass Seed, lbs.	2,947,000	3,535,000	924,000	756,000
Flax Seed, bus.	259,000	310,000	1,000	1,000
Hay, tons...	10,993	7,696	989	196
Flour, bbls...	1,280,000	1,171,000	825,000	717,000

CINCINNATI—Reported by J. A. Hallam, Chief Inspector of the Board of Trade, Inc.

	1928	1927	1928	1927
Wheat, bus..	169,400	274,000	184,800	252,000
Shelled Corn, bus.	414,400	393,400	274,400	205,800
Oats, bus...	256,000	422,000	142,000	220,000
Barley, bus..	27,200	4,800	8,000	1,600
Rye, bus...	23,800	33,600	15,400	16,800
Buckw't bus.	2,800	7,000		
Grain Sorghums, bus.	1,400	1,400		
Ear Corn, bus	11,000	13,000		
Feed, tons...	480	600		
Hay, tons...	7,634	4,125		

DULUTH—Reported by Chas. F. MacDonald, Secretary of the Board of Trade.

	1928	1927	1928	1927
Wheat, bus..	31,558,564	30,628,926	23,633,479	27,052,612
Corn, bus...	2,419	11,524		
Oats, bus...	704,558	37,161	675,379	188,822
Barley, bus..	6,677,778	5,671,305	8,328,526	5,605,842
Rye, bus...	2,789,543	5,905,825	3,027,034	6,208,676
Flax Seed, bus.	3,154,067	4,427,894	1,779,514	2,025,075
Flour, bbls...	672,205	888,055	749,930	984,210

FORT WILLIAM, ONT.—Reported by E. A. Ursell, Statistician of the Board of Grain Commissioners for Canada.

	1928	1927	1928	1927
Wheat, bus..	81,360,930	51,415,916	59,036,625	39,296,166
Corn, bus...		4,603		4,603
Oats, bus...	3,686,548	1,093,987	1,829,364	83,126
Barley, bus..	11,367,286	5,696,365	8,294,895	5,373,343
Rye, bus...	1,392,590	2,381,693	947,866	1,921,541
*Mixed Grain, bus.	350,413	121,462	62,956	14,947
Flax Seed, bus.	449,505	266,433	385,240	610,108

*50 lbs. per bushel.

INDIANAPOLIS—Reported by Wm. H. Howard, Secretary of the Board of Trade.

	1928	1927	1928	1927
Wheat, bus..	733,500	369,000	255,000	493,000
Corn, bus...	2,053,000	1,923,000	1,192,000	1,286,000
Oats, bus...	1,226,000	734,000	1,146,000	776,000
Rye, bus...	16,000	1,600	8,000	1,600
Flour, bbls...	43,771	49,470		

KANSAS CITY—Reported by W. R. Scott, Secretary of the Board of Trade.

	1928	1927	1928	1927
Wheat, bus..	7,842,120	8,344,050	6,603,740	5,038,600
Corn, bus...	1,437,000	753,000	828,500	910,500
Oats, bus...	512,000	560,000	214,000	264,000
Barley, bus..	411,200	228,800	401,600	80,000
Rye, bus...	16,500	45,000	31,500	49,500
Bran & Shorts, tons	7,480	5,420	20,940	16,200
Kafir Milo Corn, bus.	236,500	112,200	124,000	129,000
Hay, tons...	29,292	26,412	9,264	7,284
Flour, bbls...	111,475	74,100	815,475	895,050

LOS ANGELES—Reported by M. S. Thiebaud, Secretary of the Grain Exchange.

	1928	1927	1928	1927
Wheat, cars...	339	231		
Corn, cars...	161	211		
Oats, cars...	70	39		
Barley, cars...	197	179		
Rye, cars...	1	0		
Milo, cars...	40	118		
Kafir, cars...	6	12		
Bran, cars...	124	138		
Flour, cars...	171	148		

MILWAUKEE—Reported by H. A. Plumb, Secretary of the Chamber of Commerce.

	1928	1927	1928	1927
Wheat, bus..	640,800	211,680	327,390	313,132
Corn, bus...	461,760	1,104,080	310,925	888,127
Oats, bus...	949,200	1,660,600	826,475	1,015,458
Barley, bus..	2,110,080	1,208,480	824,890	315,645
Rye, bus...	548,100	66,150	54,020	42,362
Timothy Seed, lbs.	625,240	210,000	104,800	96,493
Clover Seed, lbs.	2,048,884	359,243	662,626	130,387
Flax Seed, bus.	144,430	175,880	2,860	
Hay, tons...	393	528	12	432
Flour, bbls...	287,700	344,664	6,800	30,465
Feed, tons...	5,910	7,212	7,960	9,598

MINNEAPOLIS—Reported by G. W. Maschke, Statistician of the Chamber of Commerce.

	1928	1927	1928	1927
Wheat, bus..	23,166,400	21,563,680	6,699,440	7,277,140
Corn, bus...	833,970	534,350	199,920	349,080
Oats, bus...	2,316,680	2,572,510	3,206,590	3,114,480
Barley, bus..	3,966,320	2,343,000	3,629,200	2,323,290
Rye, bus...	1,267,660	660,340	895,320	271,680
Flax Seed, bus.	3,689,920	3,894,120	822,820	550,210
Hay, tons...	1,521	1,933	154	50
Flour, bbls...	22,410	36,545	1,199,033	1,374,333

NEW ORLEANS—Reported by S. P. Fears, Chief Grain Inspector and Weighmaster of the Board of Trade, Ltd.

	1928	1927	1928	1927
Wheat, bus..			1,761,717	1,472,708
Corn, bus...			123,251	167,203
Oats, bus...			27,540	77,979
Barley, bus..			956,200	
Rye, bus...			160,000	180,000

NEW YORK CITY—Reported by H. Heinzer, Statistician of the Produce Exchange.

	1928	1927	1928	1927
Wheat, bus..	8,543,300	8,145,000	4,771,000	556,300
Corn, bus...	169,500	171,000		26,000
Oats, bus...	1,130,000	620,000	607,000	808,000
Barley, bus..	2,428,600	3,202,200	1,454,000	2,128,000
Rye, bus...	315,000	638,500	177,000	401,000
Clover Seed, bags		600	3,394	13,553
Other Grass Seed, bags	84		250	
Flax Seed, bus.	223,000	243,500		
Hay, tons...	3,221	4,401		1,297 bales
Flour, bbls...	1,539,376	1,310,956	452,000	561,000

OMAHA—Reported by F. P. Manchester, Secretary of the Omaha Grain Exchange.

	1928	1927	1928	1927
Wheat, bus..	3,902,400	3,009,600	2,987,600	2,751,000
Corn, bus...	1,076,600	1,404,200	1,008,000	1,458,800
Oats, bus...	504,000	1,196,000	598,000	616,000
Barley, bus..	332,800	267,200	377,600	185,600
Rye, bus...	196,000	266,000	259,000	261,800

PORTLAND, ORE.—Reported by F. W. Clark, Secretary of the Merchants' Exchange.

	1928	1927	1928	1927
Wheat, bus..	4,856,950	7,886,550	3,048,504	7,256,015
Corn, bus...	155,375	123,000	143	
Oats, bus...	186,200	220,000	8,201	13,054
Barley, bus..	43,200	44,800	1,203	44,800
Rye, bus...	24,650	30,000		12,000

ST. LOUIS—Reported by C. Rader, Secretary of the Merchants Exchange.

	1928	1927	1928	1927
Wheat, bus..	5,524,400	2,569,000	4,385,000	2,455,450
Corn, bus...	2,170,000	1,992,200	1,042,800	816,200
Oats, bus...	2,020,000	1,746,000	1,562,000	1,414,000
Rye, bus...	58,500	211,900	35,700	163,800
Barley, bus..	592,000	190,400	285,390	24,000
Kafir, bus...	46,800	36,000	27,600	27,600
Hay, tons...	7,644	7,056	1,524	1,680
Flour, bbls...	643,830	535,250	477,040	394,170

SUPERIOR—Reported by J. W. Conner, Secretary of the Wisconsin Grain & Warehouse Commission.

	1928	1927	1928	1927
Wheat, bus..	17,184,081	16,400,818	14,612,482	13,059,055
Bonded Wheat, bus.	309,743	292,760	244,248	204,342
Bonded Oats, bus.	2,610			
Bonded Rye, bus.		13,264		
Bonded Barley, bus.	156,570	160,591	178,363	112,640
Bonded Flax, bus.		2,428		
Corn, bus...	5,922	15,541		
Oats, bus...	277,776	59,235	756,272	116,812
Rye, bus...	1,302,130	3,969,141	1,059,798	3,889,251
Barley, bus..	3,715,456	4,686,340	3,626,587	4,932,307
Flax, bus...	1,396,475	1,288,602	754,654	775,884

TOLEDO—Reported by Archibald Gassaway, Secretary of the Produce Exchange.

	1928	1927	1928	1927
Wheat, bus..	1,603,110	1,736,365	501,015	1,100,130
Corn, bus...	1,037,500	185,000	9,500	27,300
Oats, bus...	588,350	389,500	232,950	142,000
Barley, bus..	44,400	1,200	16,160	
Rye, bus...	8,400	8,400	1,580	940
Timothy Seed, bags	779	3,626	86	2,461
Clover Seed, bags	4,003	4,403	528	338
Alsike Seed, bags	704	1,228	362	189

PHILADELPHIA—Reported by A. B. Clemmer, Secretary of the Commercial Exchange.

	1928	1927	1928	1927
Wheat, bus..	348,322	763,372	283,656	920,783
Corn, bus...	12,273	87,952		
Oats, bus...	106,026	106,547	59,464	
Barley, bus..	451,653	54,650	191,577	22,061
Rye, bus...	3,886	117,171		152,387
Flour, bbls...	205,395	221,659	7,210	32,876

PEORIA—Reported by John R. Lofgren, Secretary of the Board of Trade.

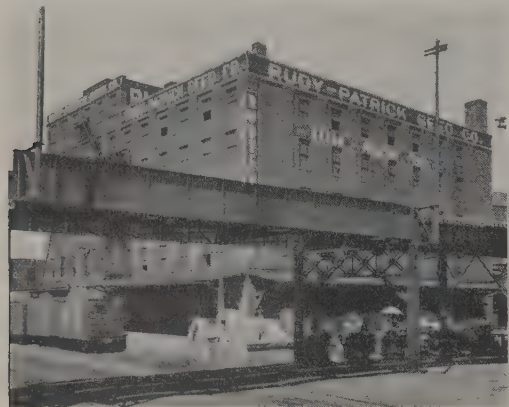
	1928	1927	1928	1927
Wheat, bus..	262,800	156,800	235,200	156,000
Corn, bus....	2,046,000	2,349,250	1,017,400	1,140,850
Oats, bus....	581,600	581,100	425,200	563,400
Barley bus..	260,400	110,200	82,600	36,200
Rye bus.....	38,800	3,600	2,400	3,200
Millfeed, tons.	3,800	31,160	43,72	38,146
Hay, tons....	4,630	5,520	150	80
Flour, bbls...	276,500	238,400	257,100	243,400

HAY, STRAW AND FEED

THE Rudy-Patrick Seed Company, one of the largest seed companies in this section, and the oldest poultry feed distributor in Kansas City, Mo., is opening a new mill there which will double its output of poultry and stock feeds. In connection with this expansion program it is interesting to look into the history of this seed company, which saw the possibilities in the poultry feed field early, added it as a sideline, and developed it to a place where its feed business now constitutes one-third of its \$2,500,000 yearly volume.

The Rudy-Patrick Seed Company was organized in 1911, with Howard S. Patrick as president, Roy A. Edwards, vice-president, R. M. Eldridge, vice-president, W. E. Hoover, treasurer, and John W. Miller, secretary. All the men had been in the seed business before, having been associated with the Peppard Seed Company, and they started their own business with the experience and the capital to make it a success. In 1911 the Rudy-Patrick Seed Company was incorporated for \$40,000, and, located in its four-story building at Tenth and Hickory, it did a \$500,000 volume of seed business in their first year.

With such a beginning it is not surprising that the first plant was soon outgrown and in 1914 the company sought larger quarters at 1306 West



SEED PLANT OF THE RUDY-PATRICK SEED COMPANY, KANSAS CITY, MO.

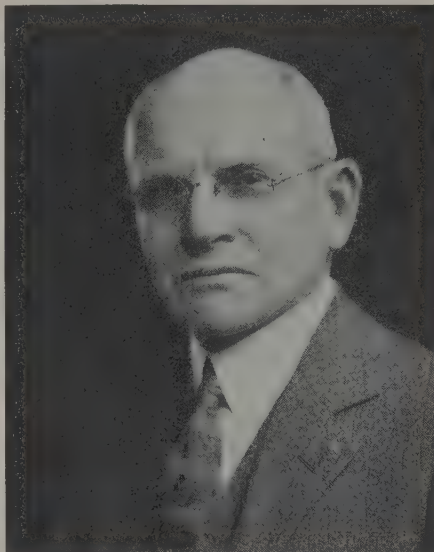
Eighth Street. Then in 1916 it bought its present seed plant at 816 Santa Fe.

It was in the next year that the Rudy-Patrick officials began to look into poultry feeds as a possible addition to their seed business. At that time there were no poultry feed distributors in Kansas City, and believing that the line would work in nicely with their established business, and realizing that they had practically an open field, they bought their first poultry feed mill in 1917. The plant was located at Second and Nebraska in Kansas City, Kan. This mill with a capacity of eight cars of manufactured feed per day, 75,000 bushel bulk storage capacity, and a 50-car sacked storage capacity, is still being operated by Rudy-Patrick and will be superseded by the new mill, as soon as the transfer of operations can be consummated.

The new mill occupies the old Atlas Mill, just across the street from the main plant of Rudy-Patrick. It is a six-story building comprising 55,000 square feet ground area, and is of brick and concrete construction. The interior is mill constructed and a sprinkler system gives fire protection. They have a bulk storage capacity of 250,000 bushels and warehouse capacity of 250 cars. The grain storage is of concrete construction, and the warehouse unit of brick. The molasses capacity is two cars, which is accommodated by a steel storage unit. The mill has a first class concrete oat mill, fully equipped, and there are seven other smaller buildings which

Seed and Feed Firm Adds to Facilities

By M. SCHWIND



HOWARD S. PATRICK

will be used for storage and the manufacture of various kinds of feed. They plan to run the oat mill at full capacity for the manufacture of feeding oat products. The oat mill has a capacity of 200 barrels per day.

The mill is well equipped and has a capacity of 600 tons of prepared feed per 24 hours. They use six Eureka Grain Separators, two Bar-Nun Hammer

into advertising extensively, and uses newspaper and direct farmer advertising, as well as radio programs. It operates principally in Missouri, Kansas, Oklahoma, Arkansas, Nebraska, Iowa, Illinois and the Southeast.

The moving force behind the Rudy-Patrick Seed Company is Howard S. Patrick, president of the company. Mr. Patrick entered the seed business in Kansas City in 1877, just 51 years ago. He was office boy with Trumbell, Reynolds & Allen to start with, and was with that company for 10 years. He then became associated with the Peppard Seed Company, and served 24 years in the employ of that firm. After 34 years as an employee of someone else, and when, as he says, he was old enough to quit, Mr. Patrick started out to found his own business. With men many years his junior as his associates, Mr. Patrick organized the Rudy-Patrick Seed Company, and the success of his enterprise has long since been demonstrated.

As one of the pioneers in the seed business in this section, Mr. Patrick has many interesting tales to tell of the early history of seed distribution in Kansas City. When he came to Kansas City there were no exclusive seed houses here, but seeds were handled along with agricultural implements and vehicles. In the early 80's the Trumbell, Reynolds & Allen company gave up its implement business and started dealing in seeds exclusively. In those days, Osage orange seed was a prominent feature of the seed business, for with no wire fences and no lumber, the farmers used Osage orange hedges for fences. Alfalfa was just being introduced into this country at that time. Two carloads of Alfalfa seed was an average yearly volume in those days.

Recalling his early training as an office boy, Mr. Patrick says the duties of the office boy 50 years ago were somewhat different from those of the present youth. The company kept a horse and buckboard, and if a freight rate was wanted or a telegram had to be sent the office boy jumped into the buckboard and did the errand. When the first tele-



FEED MILL OF THE RUDY-PATRICK SEED COMPANY

Mills, two Sprout-Waldron Attrition Mills, and two feed mixers. Sixteen Draver Feeders are included in the equipment, and four Eureka Feed Packers. The mill has four automatic scales, and eight Fairbanks Hand Scales. There is a steam engine and three steam boilers. Central station service supplies the current for use in the mill, and electricity is the power medium. Sixty-nine electric motor units are in use. Belt drives are used exclusively. The mill has two freight elevators. They have direct connection with the Frisco Railroad. C. McBrearty is the head miller.

The Rudy-Patrick Company puts out feeds under the brand names, "Oh Boy," "Royal," "Everyday," and "R. P." Within the last two years it has gone

phones were installed, with 36 subscribers in the city of Kansas City, Trumbell, Reynolds & Allen had a phone put in. However it was not the office boy who answered the telephone bell. For the first month the president took all the calls. When the novelty had worn off for him the chief clerk answered the phone, and Mr. Patrick says it was six months before the office boy had a chance at it.

Rudy-Patrick are spending approximately \$25,000 in remodeling the old Atlas plant, and in putting in additional machinery. When the new plant is in operation they expect to double their yearly output of poultry and stock feeds. With the equipment available there should be no difficulty in meeting the increasing demand for their products.

**IRREGULAR CHANGES AND SLOW
TRADE IN NEW YORK FEED MARKET**

By C. K. TRAFTON

As far as price changes are concerned, it is impossible to make a positive statement that will cover all varieties of feed in the New York market during the past month, some kinds having reacted after a further advance while others resumed their upward movement after a temporary recession; so that the net changes in prices as compared with those current a month ago show considerable irregularity. On the other hand, it can be said that, although this is the season when some increase in buying is normally to be expected, the volume of business was extremely small on the whole, although in a few cases the temporary decline in prices resulted in a slightly better business. The lack of general animation was still traceable to conditions noted in previous reviews, namely, that the majority of buyers loaded up with unusual freedom several months ago and, in addition, some of them are over-loaded owing to the fact that some mills have already shipped in a great deal if not all of the feed sold for delivery up to the end of the year. At the same time, as previously noted, this heavy selling of several months ago has still kept many mills out of the market as far as fresh offers are concerned and some of them are expected to stay out until the end of November. Wheat feeds scored further advances early in the month, but afterwards became somewhat easier. Nevertheless, standard middlings are still quoted at last month's price of \$36.25, while Spring bran at the same price shows a gain of \$1. In spite of the partial set-back buyers still showed little interest in prompt feeds, although some inquiry was noted for January-March shipments of which no offers have yet been reported. Red Dog was independently easy, being offered \$2 lower at \$47.50, while second clears, of which there was some accumulation, were still weaker, actually being offered at \$1.50 below Red Dog. Corn goods were much weaker early in the month, mills offering more freely at concessions in order to move the goods. White hominy broke \$2.50 to \$37.50, while Yellow was \$3 lower at \$37. A fair trade was reported on the decline and it soon became evident that mills had sold all that they cared to as late in the month the offerings became extremely light at higher prices; \$39.10 for White hominy and \$38.75 for Yellow. Buyers, however, refused to follow the advance and business became very slow. Cottonseed oil meal prices advanced still further early in the month, but later nearly all of the gain was lost, latest quotations showing net gains of only 25 cents @75 cents per ton with 36 per cent feed quoted at \$49; 41 per cent at \$52.65; and 43 per cent at \$56. Although little business was done in this territory, producers were encouraged by further good business in the South. Linseed oil meal prices have continued too high to permit of much business, 34 per cent feed being quoted at \$61. A little was done, however, at slightly lower prices.

HAY MARKETS GENERALLY STEADY

Hay markets showed very little change during the week ending November 10, according to the weekly hay market review of the United States Bureau of Agricultural Economics. Country loadings were generally light and offerings were about equal to trade needs for most classes of hay. Shipping inquiry from southeastern areas increased slightly with the shorter pastures and the reduction in local forage supplies. The estimate of the tame hay crop remains unchanged at 93,000,000 tons against 106,000,000 tons last season.

Timothy markets were generally quiet with moderate arrivals meeting only limited demand. Quotations at New York were firm for top grades but barely steady for medium to lower grades. Demand at Boston was very light and liberal concessions were necessary to move the offerings to the lower grades. Arrivals at Cincinnati were light but inquiry was also limited, particularly from the southern areas. Stocks held over from the recent heavier purchases before the increase in freights became effective were restricting inquiries to meet current

needs. The Chicago market was practically unchanged with all good quality Timothy, Clover and Timothy Clover mixtures grading No. 2 or better moving readily.

Alfalfa markets were generally firm to slightly higher with an active demand for good quality of hay suitable for dairies and offerings of this type light. Medium grades at Kansas City were only in moderate supply and scarcely sufficient for trade needs, which held the market firm for these grades. Direct shipments of Nebraska hay were reported to points in Iowa and Illinois. Considerable Oklahoma hay was moving to Arkansas and Texas points. Demand for Colorado Alfalfa continued active but local requirements were reported to be sufficiently large to absorb all offerings. Growers appeared inclined to hold for higher prices. Very little Colorado hay was being received at Kansas City. Good quality Alfalfa was in brisk demand at both Minneapolis and Omaha but the bulk of the offerings at these markets was of the lower grades. Pacific Coast markets were slightly stronger than a week ago. No. 1 Alfalfa in the Yakima valley of Washington was quoted at \$13 to growers with a good demand from the west coast. The Los Angeles market was firm although demand was limited.

Prairie markets were about steady with the country movement showing some increase as a result of more favorable weather conditions. Lighter offerings at Kansas City were readily taken by local stockyards but shipping was only moderate. Oklahoma hay was reported moving rather readily on army contracts and to points in Arkansas. Prairie receipts at Omaha were light and the brisk inquiry caused a slight advance in prices.

HAY RECEIPTS LIGHT

Under date of November 7, the John Devlin Hay Company, Inc., Chicago, Ill., says: "Light receipts with a good trade out gave us quite an active and firm market here this morning. During coming two weeks we should have our best buying.

"Good quality oat, wheat and rye straw wanted."

**FEDERAL HAY INSPECTION AT
MEMPHIS**

The United States Bureau of Agricultural Economics announces that it has completed a cooperative agreement with the Memphis Merchants Exchange providing for Federal hay inspection at Memphis. M. B. Houseal, who has been chief hay and grain inspector for the Memphis Exchange for a number of years, has recently taken a course of training in the use of Federal hay standards at the Kansas City laboratory of the Bureau of Agricultural Economics and has been licensed as Federal Hay Inspector at Memphis. Hereafter all hay arriving at Memphis for members of the Exchange will receive Federal hay inspection as well as any other hay on which inspection is requested.

**FEED TALKS NOW ON MONTHLY
BASIS**

The Eastern Federation of Feed Merchants has decided to discontinue its weekly radio talks and will now broadcast but once a month. The first talk under the new arrangement is being given November 15 and thereafter will be given on the third Thursday of each month at 7:30 p. m. eastern standard time. The addresses will be given over WGY and associated New York stations and will deal with dairy and poultry feeding.

W. A. Stannard is secretary of the federation and is responsible for the excellent talks which have been given to retail feed dealers and those interested in the subject of feeding.

**LARGE PRODUCTION OF SOYBEANS
FOR PLANTING**

The commercial production of soybeans for planting is expected to be slightly larger than last year, according to reports received by the United States Bureau of Agricultural Economics. As favorable growing conditions prevailed in most of the heavy producing states excepting the Carolinas and Geor-

gia, increased yields over those of a year ago were expected. Acreage was increased last spring especially where wheat had been winter-killed. A greater acreage is expected to be harvested in many of these districts — namely, Illinois, Indiana and Missouri. In general, production is expected larger in the Middle Western States but smaller in the East, except Georgia.

Harvesting began at about the same time as a year ago or a few days earlier in the majority of districts, and continued under more favorable conditions, especially in the Middle West. Up to October 16, about 60 per cent of the crop this year and 55 per cent last year as well as two years ago had been harvested in other states than North Carolina. In eastern North Carolina about 10 per cent had been harvested up to that date this year and 5 per cent last year.

Prices to growers were not fully established on that date in many sections but were lower than last year in some sections and higher in others. Offers to growers for the cheaper varieties averaged about \$1.35 per bushel or the same as last year.

Although the supply from the 1927 crop was larger and better distributed than usual, retail sales of soybeans showed a 10 per cent increase and sales to mills were reported in good volume. Carryover is regarded to be about the same as last year.

FEED MARKET STEADY

The feed market was generally steady during the week ending November 7 with fair demand for moderate offerings, according to the weekly feed market review of the United States Bureau of Agricultural Economics. Fall pastures are in fair to good condition in most sections. Recent generous rains in the southwestern states benefited ranges and pastures.

Output of wheat mill feeds as indicated by flour production continued to be of large volume. The production of flour at the principal milling centers for the week ending November 3 totaled about 1,678,000 barrels as compared with 1,737,000 barrels a week ago. This output is, however, larger than that for the corresponding week a year ago.

An improved demand, principally on account of the colder weather, accounted largely for the firmer wheat feed market during the past week. The market for wheat feeds held firm at Minneapolis. Considerable business was transacted at first of the month and mills are now well supplied with shipping directions. Bran at most of the important mills has been sold ahead until the end of the year. Standard middlings were being offered moderately. Flour middlings were steady but Red Dog was weak. Mill feed situation at Buffalo was slightly firmer resulting from better demand and smaller offerings. Mills in and near that market, though, running at full capacity were behind on shipments and were reported to have large quantities of feed sold ahead. Market for light offal was stronger at Chicago while heavy offal was easy. Moderate demand for very light offerings at Kansas City resulted in a firm bran market and steady prices. Inquiry for shorts was limited and demand was unable to absorb all offerings. Colder weather in the central west has resulted in excellent demand for mixed car trade at interior points.

Lower cottonseed prices, larger ginnings and mill output some accumulation of seed and meal stocks, and favorable weather favoring cotton marketing were factors in the week's dull cottonseed cake and meal market. However, foreign demand was good and considerable quantities of cottonseed cake and meal moved to Scandinavian countries, Ireland and England.

Although the quality of cottonseed is very favorable, trade reports indicate that the Piedmont section of Georgia and the Carolinas are producing strictly prime seed, but south Georgia and eastern South Carolina seed are badly storm damaged.

Linseed meal production during the quarter ending September 30 was about 34,000 tons less than during the previous quarter, April 1 to June 30, and about 24,000 tons less than during the corresponding period a year ago. However, the output of linseed meal for the year ending September 30,

1928, was approximately 702,000 ton or about 4.6 per cent above last years production.

According to the Department of Commerce 212,882 tons of flax seed were crushed during the months July, August and September. This consumption of flaxseed was 56,140 tons less than during the previous three months and 40,549 tons less than for the same period a year ago.

Linseed meal market was steady with fairly active demand for small offerings. Prices were generally unchanged from a week ago. Linseed meal at Buffalo continued strong with good demand, especially for nearby shipment and light offerings. Resellers offerings were small. Mills were only able to offer shipments within 30 days as they were well sold ahead and supplied with shipping instructions. Mill production continued light due to slow demand for oil. Linseed meal was steady at Minneapolis with light offerings and fair demand. As most of the recent sales contracted were below present market, the supply of shipping directions was relatively good. On the basis of present quotations, buying is largely for immediate needs. A fair demand for limited offerings prevailed at Chicago.

Gluten feed was about unchanged. Offerings were more liberal at Buffalo but prices held firm as selling pressure was lacking. Mill production was somewhat heavier due to better demand for main products, larger movement and lower prices of new crop corn. Offerings were meeting a good demand at Chicago.

Hominy feed was fairly steady. Demand was improved and offerings smaller, resulting in firmer market at Buffalo. Some mills were reported sold up for November as production was reduced. Prices were advanced at Buffalo, Cincinnati, St. Louis and Atlanta. Hominy feed was \$1 lower at Omaha as corn prices declined to new crop basis. Local mills were asking prices above the market as they were sold up for several months ahead.

Alfalfa meal prices held steady. Middle western manufacturers continue to operate full time. Demand is fair.

TOP GRADES HOLD FIRMLY IN NEW YORK HAY MARKET

By C. K. TRAFTON

With trading still slow as a rule, the New York hay market was featured during the past month by continued firmness in the top grades and a fairly sharp break in the lower grades after a brief period of firmness. The net result is that the top grades are unchanged to \$1 higher than a month ago while lower grades are unchanged to \$1 lower. Early in the month receipts were slightly larger, but as demand was fair values were well held. This was especially true of small bales which were in very light supply. Demand was still confined mainly to top grades, but these were very scarce and held above buyers' views. The latter refused to advance their bids and showed more willingness to substitute lower grades. As a consequence small No. 2 sold \$1 higher and both large and small No. 3 also \$1 higher. Later No. 2 or better still found a ready outlet at firm prices, but buyers began to back away from larger supplies of lower grades. The increase was especially marked late in October owing to the arrival of a river boat and two Canadian barges. Pressure from the latter also affected the market and lower grades dropped \$1@\$.2 per ton. The late arrivals included mostly ordinary grades, mainly in small bales, and some of it stained and musty, and as a consequence some very poor stuff sold as low as \$15. Although farmers in some sections are still too busy with their corn, the weather has been generally favorable for moving hay and some experienced traders expect that the liberal movement will keep up. They believe that lower grades will still make up the bulk of the arrivals, so that prices for such grades may drop still further, but for the same reason they expect that prices for top grades will be firmly maintained.

THE first estimate of production of wheat in Egypt is 37,294,000 bushels, or 16 per cent below the 1927 production.

NEW FEED BRANDS

"JUMBO" poultry, dairy and stock feeds. The McMillen Company, Fort Wayne, Ind. Filed August 29, 1928. Serial No. 271,703. Published October 9, 1928.

"PECO" mixed feed, horse feed, horse and mule feed, grit, barley chop, dairy feed, chick fattener, chick starter and grower, egg mash, corn feed meal, ground oats, ground kafir, rye chop and pigeon feed. The Pittsburg Elevator Company, Pittsburg, Kan. Filed June 30, 1928. Serial No. 268,936. Published October 9, 1928.

"SUCCESS BRAND CONCENTRATE" pig and hog feed. United Bi-Products Company, Kansas City, Mo. Filed March 14, 1928. Serial No. 263,187. Published October 9, 1928.

"MOORMAN'S" mineral feeds for hogs, poultry, cattle, sheep and horses. Moorman Manufacturing Company, Chicago, Ill. Filed August 2, 1928. Serial No. 270,495. Published October 16, 1928.

Rabbit food. Ransom Coal & Grain Company, Kansas City, Mo. Filed August 2, 1928. Serial No. 270,507. Published October 16, 1928.

"WASHBURN'S GOLD MEDAL" stock and poultry feed. Washburn Crosby Company, Minneapolis,

mash, starter mash, growing mash, chick feed, scratch feed. Northwestern Distributing Company, Inc., Mason City, Iowa. Filed July 3, 1928. Serial No. 269,034. Published October 30, 1928.

"TYMO FEEDS" dairy feed, mixed feed, horse and mule feed, cream meal, egg mash, scratch feed, developing cream, starting and growing mash, and baby chick scratch. Tindle Milling Company, Springfield, Mo. Filed August 18, 1928. Serial No. 271,280. Published October 30, 1928.

"CLOVER BLOSSOM" wheat flour, meal, horse feed, dairy feed, stock feed and poultry feed. Arkadelphia Milling Company, Arkadelphia, Ark. Filed July 12, 1928. Serial No. 269,441. Published September 11, 1928.

"MANAMAR" stock and poultry feeds. Philip R. Park, Naval Station, San Pedro, Calif. Filed July 7, 1928. Serial No. 269,250. Published September 11, 1928.

"MANAMAR LIFE FROM THE SEA" stock and poultry feeds. Philip R. Park, Naval Station, San Pedro, Calif. Filed July 7, 1928. Serial No. 269,251. Published September 11, 1928.

"GEORGIA BELLE" cornmeal, dairy rations, poultry feed and stock feed. La Fayette Roller

IPACO



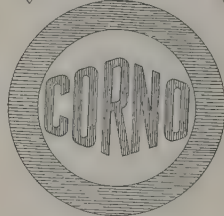
G. L. F. "P E C O"



NORTHWESTERN MOR-GAIN



PAGE



JUMBO

MOR-GAIN D I C A P H O

MANAMAR



WOW



TYMO FEEDS



MANAMAR

GEORGIA BELLE

Minn. Filed March 21, 1927. Serial No. 246,139. Published October 23, 1928.

"DICAPHO" stock and poultry food. Bay Chemical Company, Inc., New Orleans, La. Filed September 10, 1928. Serial No. 272,125. Published October 23, 1928.

"PAGE" wheat flour, self-rising flour, cornmeal and poultry feeds. The Page Milling Company, Luray, Va. Filed June 7, 1928. Serial No. 267,821. Published October 2, 1928.

"G. L. F." feeds for horses, cattle, poultry and other animals commonly kept or produced on farms, and ingredients for the mixing and preparation of the same, comprising barley, oats, meal, corn, wheat and feed seeds. Co-operative Grange League Federation Exchange, Inc., Syracuse, N. Y. Filed July 2, 1928. Serial No. 268,969. Published October 30, 1928.

"MOR-GAIN" for stock foods of different kinds, namely pig meal, dairy feed, and dairy supplement; poultry feeds, namely, laying mash, starter mash, growing mash, chick feed and scratch feed. Northwestern Distributing Company, Inc., Mason City, Iowa. Filed July 3, 1928. Serial No. 269,033. Published October 30, 1928.

"WOW" dog biscuits and dog cereals. George H. Bowen, Boston, Mass. Filed July 23, 1928. Serial No. 270,008. Published October 30, 1928.

"IPACO" hog feed. Iowa Packing Company, Des Moines, Iowa. Filed September 15, 1928. Serial No. 272,497. Published October 30, 1928.

"NORTHWESTERN MOR-GAIN" for foods of different kinds, namely, pig meal, dairy feed and dairy supplement; poultry feeds, namely, laying

Mills, La Fayette, Ga. Filed July 3, 1928. Serial No. 269,029. Published September 11, 1928.

"CORNO" horse feeds, poultry feeds, mash feeds, dairy feeds, hog feeds and stock feeds. The Corno Mills Company, East St. Louis, Ill. Filed June 7, 1928. Serial No. 267,633. Published September 11, 1928.

Trademarks Registered

247,899. Wheat mixed feed for cattle, hogs, and poultry. The Frank R. Prina Corporation, New York, N. Y. Filed April 4, 1928. Serial No. 264,328. Published July 3, 1928. Registered October 9, 1928.

247,971. Livestock foods. John W. Eshelman & Sons, Lancaster, Pa. Filed December 31, 1927. Serial No. 259,538. Published June 5, 1928. Registered October 9, 1928.

248,790. Cereal products, namely wheat flour, Graham flour, yellow cornmeal, white cornmeal, scratch feed for poultry chick starter, laying mash, growing mash, chick grains, whole grains, mixed grains, ground grains and cracked grains. E. Steen & Bro., Baltimore, Md. Filed May 28, 1928. Serial No. 267,149. Published August 14, 1928. Registered October 30, 1928.

A RECENT ministerial decree provides for the exemption from export duty and quay dues of corn and wheat bran produced in Egypt. Formerly such products were subject to an export duty of 1 per cent ad valorem and export quay dues of .012 per cent ad valorem at the ports of Alexandria, Port Said, and Suez.

Protein Analysis of Wheat

A Discussion of the Results of Five Years' Experience in Operating Official Protein Laboratories

By L. B. ARMSTRONG*

IN DISCUSSING the protein test it is not my intention to attempt to discredit the marketing of wheat on protein analysis. Neither shall I take the position that it is an unqualified success. I shall merely attempt to handle the subject from a commercial standpoint and to give you what information we have, based on our five years' experience in operating official protein laboratories.

The Kansas State Grain Inspection Department was the first in the country to establish official protein laboratories and although we have made protein tests on more than 400,000 carlots of wheat, we believe that the protein analysis, from a commercial standpoint is still an experiment. We do not think that either the grain trade or our department are yet in a position to pass final judgment as to whether the system of marketing wheat on protein content is a success or a failure. The establishment of the protein test made a radical change in methods of marketing wheat; probably the most radical in the history of the grain business.

Each year's wheat crop is a problem in itself and it will take a number of years, possibly a decade, before the grain trade will be in a position to pass a final judgment as to the value of the protein analysis. Therefore, at the present time, we might class the protein test as "a five years' experiment in new methods of grain merchandising."

The demand for protein analysis came primarily from the mills. For a number of years prior to establishing official laboratories the larger mills had been operating their own cereal laboratories and they insisted that their laboratory tests established the fact that the system of buying hard wheat on grade and color did not reflect the true milling value of the grain. They stated that milling tests had proven that much of the dark wheat on which they had paid a premium showed lower milling results than Hard wheat with a higher protein content. For two years prior to the installation of our laboratories, many mill buyers insisted on a protein test on premium wheat. These tests were made at mill laboratories or at the few general commercial laboratories then operating, but there was such a lack of uniformity that the trade was dissatisfied and decided that if they were obliged to sell on protein test, that they would demand an official analysis.

In response to this demand, our department established in the fall of 1922, official protein laboratories at Kansas City, Wichita and Hutchinson. These laboratories have been improved and rebuilt until at the present time we have three of the finest, best equipped protein laboratories in the country. When we decided to install these laboratories we fully realized that we were adding to our other duties a very difficult technical service that would require careful and constant supervision and accurate methods. In making this analysis an exact gram of wheat is used. A gram of wheat is approximately 50 kernels and a 1,400-bushel carlot contains about one and one-half billion kernels. It is estimated then, if an accurate protein test is to be secured, that each car must be loaded with an absolutely uniform quality of wheat and that laboratory methods must be standardized to a point where each step in the methods of analysis shall be identical in all protein laboratories.

I think that every practical grain man will admit that there are many unevenly loaded cars. Country grain dealers receive various grades of wheat from the farmers and it is often impractical to keep the different grades separate. Many carloads are loaded direct from the dump without being thoroughly mixed. Grain inspection is not an exact science.

It is a commercial service that must be handled by commercial methods. It has never been claimed that uniform inspection could be made on unevenly loaded cars. There are many such cars and most of our inspection troubles and grade differences are the result of uneven loadings. In the protein analysis these troubles are multiplied by the fact that wheat taken from different parts of the same farmer's field sometimes shows a variation of 1/2 to 1 per cent in protein and therefore many cars which are loaded uniformly as far as grade are concerned, will show a different protein analysis in different parts of a car.

There are three outstanding problems which must be solved before the protein test can be classed as an unqualified success. The first is to secure a sample which fairly represents the contents of a car. In discussing the protein test let us keep in mind the fact that this result can only be attained in absolutely uniformly loaded cars, as the test is made on a one gram portion of a sample taken from 1,000 to 1,800 bushels of wheat.

The problem of a uniform sample is as much your problem as ours. There are too many unevenly loaded cars. We are making every effort to bring our sampling service to the highest possible state of efficiency, but the shipper can do more to solve this problem than we can. You can't load a half dozen different farmers' wheat from the dump direct to the car and expect to have the protein show the same results on different samples drawn from that car. I realize that it is not always practical to thoroughly mix each car of wheat loaded, as during the rush of the harvest season many of you have neither the time nor the space to do so.

But if you expect uniform inspection and protein service, it will be necessary whenever possible, to mix your wheat in the bins before loading it into the cars. If the members of the Kansas Grain Dealers Association will co-operate with our department in this matter, this problem will not cause much trouble.

The second problem is keeping the methods of analysis by different cereal laboratories standardized to a point where they can arrive at the same result on a uniform sample. When mill buyers purchase wheat at the terminal markets on official protein they usually have the sample re-analyzed by their own mill laboratory. If the results shown are lower than the official protein, they immediately call an official recheck or appeal. This causes further complications in an already complicated system, especially during a high premium, low protein year like this.

One of the faults of the system seems to be that while cereal chemists insist that a variation of 25 points or less between laboratories is a good check, that buyers this year are basing premiums on a 10-point difference. I have before me a very interesting set of figures which illustrate the point I am trying to make on problem number two. These figures were compiled by a chemist in charge of one of the large mill laboratories in Kansas.

It is a report of the test checks made by the Kansas members of the American Associations of Cereal Chemists over a period of 40 months or nearly three and a half years. Each month a portion of a ground sample of wheat or flour in a sealed container was mailed to the various laboratories, analyzed, and the results tabulated. Please keep in mind that these samples were not commercial samples drawn from a car that might have been unevenly loaded, but in each case all laboratories received identical samples thoroughly ground and mixed. Each laboratory did not participate every month, but during the 40 months' period covered by the test an average of 27 laboratories reported each month, with the total number of

tests made 1,087. I believe you must agree that this was a fair test of laboratory results.

And yet these results are surprising. On several months the variations between the high and low analysis was from 81 to 94 points or nearly a full per cent of protein, and the average variation for the entire 40 months was 54 points or more than one-half of 1 per cent of protein, worth at the present market about six cents per bushel.

Now please don't misunderstand this statement. There are a large number of laboratories represented on this sheet. The extreme variation between a few laboratories would not be as great as among so many. But each of these laboratories was installed for the purpose of making accurate analysis for the industry or department which maintains it. All of them are using the standardized methods of analysis. If, with a uniform sample, they cannot arrive at closer results, then these checks show there must be something wrong with their methods. We are proud to state that our three laboratories showed a high degree of accuracy in these tests.

This is a problem that can only be solved by careful and continued supervision. For that reason, our chemists check their solutions and methods against each other and are continually sending check samples back and forth between laboratories. During the past 60 days we have kept a protein record of all cars moving from Wichita and Hutchinson to Kansas City. The results are very gratifying to us. We found a few wide variations caused by a difference of samples drawn from unevenly loaded cars. In these cases we had our Wichita and Hutchinson chemists mail a portion of their original sample to our Kansas City laboratory for recheck. On every one of these wide differences we found that the Wichita and Hutchinson laboratories were correct on the sample furnished them, which proved that the variations resulted from uneven loadings and not methods.

On a total of 186 cars from Hutchinson to Kansas City, 121 were within 10 points, 40 within 20 points, 15 within 30 points and only 12 cars showed a greater variation than 30 points. From Wichita, out of a total of 187 cars, 118 were within 10 points, 40 within 20 points, 18 within 30 points and only 11 cars more than 30 points variation. We think that when we consider the technical nature of the service and the many chances of error, and also the fact that these tests were made on different samples from the cars, that we are justified in stating that our laboratories are operating on an efficient basis.

The third, and possibly the most serious problem, as far as the country grain dealer is concerned, is one over which this Department has no jurisdiction. This problem, especially during the past year, has been the cause of more dissatisfaction and confusion than either of the other two. I refer to the premiums paid by mill buyers for wheat of various protein tests and the impracticability of the country dealer trying to apply the same premiums.

During the past five years, the wheat crops of the Southwest have shown a considerable variation in the average crop protein. The crops of 1923 and 1924 showed approximately the same average protein of about 12.45 and premiums were relatively high. In 1923 the average spread of premiums paid for protein on No. 2 Hard wheat of from 11 per cent to 14 per cent was 16 cents per bushel, or about five cents difference for each point of protein. In 1924 the average spread was 14½ cents per bushel or about the same as the preceeding year. The figures, of course, vary considerably from month to month, but those given are the average of each 12 months period. These first two years were fairly satisfactory to the trade, as buyers at that time did not draw the lines so close and a variation of 20 points in analysis was considered a fairly good check. Country dealers at high protein shipping points found that they had quite an advantage over their competitors whose wheat showed a lower analysis, and the protein system seemed to be working out fine.

In 1925 we had a high protein crop with the

*An address delivered by L. B. Armstrong of the Kansas State Grain Inspection Department, at a recent meeting in Kansas.

yearly protein average showing 13.00. Premiums dropped to only a few cents difference between low protein and high with the average yearly spread between 11 per cent and 14 per cent wheat of only six cents per bushel, which amounts to only two cents a point.

The 1926 crop was usually good, both in quality and protein. Our laboratories that year made nearly 100,000 protein tests with an average analysis of 13.03 per cent. Premiums for protein dropped to almost nothing and the difference between the high and low protein on the entire crop was only 3½ cents or only about a cent a point. Country dealers bought and sold wheat on a quality basis and for a time we had very few protein troubles.

And then came the low grade, low protein, unevenly loaded crop of 1927 and everybody in the grain trade of the Southwest began to realize that the protein analysis was a very different question. I am told that this year has been very unsatisfactory from the standpoint of the country grain dealer. A wet harvest, a poor quality, high moisture crop and the sudden increase in protein premiums have all worked to the disadvantage of the small elevator operator. Early in the crop movement, it became evident that the protein average was low. Premiums increased by leaps and bounds. The protein average for the crop is the lowest we have had since our laboratories were established. Our records show that from July 1 to May 1 this average was only 12.27. About 70 per cent of the crop showed a protein of less than 11.80 per cent.

The percentage of milling wheat is the lowest that it has been for years. In 1926 we had one of the highest quality crops that has ever been produced in the Southwest. The Kansas City market receipts showed that 94 per cent of the wheat marketed that year graded three or better. This year out of 52,000 carlots arriving at Kansas City from July 1 to April 1 nearly 15,000 carlots, or more than 28 per cent graded four or lower. The mill buyers would not use this low grade wheat. The demand for milling wheat with a protein test of 12 per cent or better increased premiums to the highest point in history. The average spread between 11 per cent wheat and 14 per cent wheat for the entire season has been 24½ cents. At the peak during the last of April it was about 36 cents. A car of high protein wheat sold last month on the Kansas City market at 48 cents premium over the May option.

From my own experience as a country elevator operator, I do not see how it is possible for a country dealer to buy wheat intelligently when premiums are as high as they have been this year. Chemists tell us that .20 per cent variation is a good check. Mill chemists tell their buyers the same thing and yet protein premiums have been approximately 12 per cent for each per cent, with a different price for each 1/10 per cent variation. These same buyers paid 3 cents a bushel more for 12 per cent wheat than they did for 11.85 per cent wheat. Buyers are calling rechecks and asking discounts on wheat that shows an analysis of 10 points less, and sellers are asking for additional premiums if recheck shows 10 points more than the original analysis.

Practically every cereal chemist we have talked with has insisted that the line was drawn too fine and that present premiums were not on a practical basis. Several of the largest mill buyers have stated that they were aware that they were attempting to check protein too closely, but they saw no way out of it because competition had forced premiums so high that they must insist that the analysis should not show even a fraction of a point below the contracted protein. We have talked with many members of the grain trade and a number of experienced cereal chemists relative to the protein premiums of this year. The most practical suggestion we have received was that a reasonable tolerance should be allowed from the contract protein and that premium differences should be based on wider variations. It has been suggested that

the tolerance should be not less than 20 points.

As an illustration: If wheat is purchased on an analysis of say 12 per cent and on recheck or on a different sample drawn at another market it only shows 11.80, the buyer should not demand a discount. If it shows 12.20, the seller should not ask for a premium. In our opinion, premium differences should be based on not less than 25 points variation. Many chemists insist that the variation should be 50 points or ½ per cent of protein. A wider variation in the tolerance allowed would undoubtedly eliminate some of the hair splitting differences we have had during the past few months and partially solve this very difficult problem.

I don't think there is a shipping point in the state where there is medium or high protein wheat that the protein is uniform enough so that the country buyer can know within 10 cents a bushel what his wheat will sell for at the terminal market. Summed up then we find that there are three problems to be solved in the protein situation: 1. Securing a uniform sample from the car; 2. A standardization of laboratory methods; 3. A more reasonable application of protein premiums.

The first problem concerns both our department and the shipper. We must both put forth our best efforts to see that every car is uniformly loaded and properly sampled. We assure you we are doing everything possible to maintain a sampling service at the highest state of efficiency and we ask your earnest co-operation in mixing your grain thoroughly whenever it is possible to do so.

The second problem, that of standardized methods, concerns our department alone. As I have already stated we have three of the best equipped protein laboratories in the country and believe that we have already solved this problem as far as our own laboratories are concerned. We have established a continuous check system between our laboratories, both on samples and solutions and the results on these sealed uniform samples have proven that our laboratory methods are identical at all three markets.

The third problem, that of protein premiums, has this year been the most difficult of the three. There is little that we can do to solve this problem. We are not concerned in the premiums paid or the price received for wheat. If there is to be a satisfactory solution, then it must be reached by the buyers and sellers of wheat.

I believe that the protein analysis is the most technical inspection service that has ever been set up between the seller and buyer of a raw material commodity. At the beginning I stated that I considered the protein system still an experiment. I do, but at the same time, I am of the opinion that the protein analysis, technical though it is, more nearly reflects the milling value of wheat than the old system of buying on color and point of origin. For this reason, I believe that it has come to stay. If, however, the system is to succeed, the three problems must be solved at least to an extent where the country buyer can be reasonably certain as to what his wheat will sell for at the terminal market. As we stated before, this has been a low protein year and the problem of protein premiums has been acute. If we get a high protein crop this fall, the situation then will be entirely different.

But the fact remains, that, if the grain trade continues to market wheat on the basis of protein, uniformly loaded cars, laboratory analysis and protein premiums will continue to be vital factors. In conclusion then I wish to suggest that as the protein system has apparently come to stay and is a permanent part of the grain marketing system, that your organization should do everything possible to help solve these problems. I think you should have a protein committee of outstanding grain men, men who are willing to give some time and thought to this matter and who will co-operate with your state department, the millers, the shippers, and the terminal markets in working out the solutions of the various protein problems that will arise from year to year and for which a solution must be found.

INTERNATIONAL STOCK AND GRAIN SHOW OFFERS MANY ATTRACTIONS

Thanksgiving will see the Horn of Plenty tipped decidedly in the direction of Chicago, when the International Live Stock Exposition opens its doors on the first Saturday following Thanksgiving. December 1 to 8 are the dates of the exposition.

At no other time of the year and at no other place is there to be seen so complete a collection of the very choicest products of American farm homes, fields, and feed-lots. Breeders and feeders of fat cattle have sent in their entries from the far-away west coast, according to Manager B. H. Heide, while others, he says, are being received from the tide-water country of the Atlantic.

The northern border states, as well as the southern, and that great live stock area, the Corn Belt, will each and all be represented in this final and crowning event of the live stock and agricultural show season. Incidentally a wealth of information on feed and feeding can be learned at the show.

Grain and hay from the Corn Belt will vie for the attention of the public along with crop samples from far-away Australia and New South Wales. Over 5,000 samples of 22 different varieties of grains and hays are expected to be received in the coming International Grain and Hay Show, declares Mr. Heide.

In the brilliant evening horse show, which will be the close and climax of each day's program, the very best specimens of the country's foremost stables will strive for recognition in this national competition. Farm youth has its day at the International. The National Boys' and Girls' Club Congress, held within the gates of the show, will be attended by some 1500 boys and girls from almost every state in the Union.

Educational displays—judging and auctions of about 2,500 of the finest quality steers fed during the past year—five great auctions of breeding cattle—the familiar and widely attended "Meat Shoppe" (given from a new angle this year), a Wool Show, to be held for the first time in the history of the exposition, will all compete for the attention of the visitor and tax the skill of the exhibitor.

Railroads entering Chicago have indicated that they will offer special reduced round-trip rates from points along their lines to Chicago, during International week.

MILL ELEVATORS BUSY

Official and trade reports issued last week indicated that mills entered into October operations with the heaviest wheat stocks ever recorded for the third quarter period, about one-sixth of a billion bushels. The Bureau of Census figure was 151,000,000 bushels, and pro-rated to the national capacity, a total mill holding of 166,500,000 bushels was indicated. Mills reporting to the Millers National Federation showed about the same volume.

Eighty per cent of the wheat held according to the Government report, was in private terminal elevators, in transit, in mills, or in elevators attached to mills. Thirteen per cent was in public terminal houses, and 7 per cent in country elevators, all subject to mill orders.

OATS HARVEST UP A TENTH

The 1928 oats production in 26 countries raising 91 per cent of the Northern Hemisphere crop outside Russia and China, totals 3,500,000,000 bushels, an increase of 10 per cent above the 1927 yield, according to the November report of the Department of Commerce.

In Alberta, the oats crop is reported to be averaging 33 bushels to the acre by the Provincial Department of Agriculture officials, but the quality reducing frosts have caused apprehension as to next season's seed supplies.

Oats exported from America, Argentina, and Danubian countries continue heavy as compared to shipments last year.

ASSOCIATIONS

OHIO FALL MEET WELL ATTENDED

The New Southern Hotel in Columbus, Ohio, was the scene of the fall meeting of the Ohio Grain Dealers Association on October 23. Though this was a one-day session, it was graced with a better attendance than can ordinarily be expected at the semi-annual gathering, and considerable enthusiasm was manifested. The effectiveness of the executive ability brought to bear under the administration of President Edgar Thierwechter and Secretary W. W. Cummings was well demonstrated by the good turnout and the way the program went forward without a hitch.

The meeting commenced at noon, immediately following a luncheon. Mr. Thierwechter contented himself with making a very brief informal address, and then introduced J. R. Pickell, of Chicago, who discussed prices and showed charts illustrating his theories.

The next speaker called upon was Sherman T. Edwards, feed system engineer, of S. T. Edwards & Co., Chicago. His topic was "Making a Fortune in the Feed Business."

MR. EDWARDS' ADDRESS

It sounds as if I had been given a pretty big job but then, to keep pace with this rapidly changing world, we've all got to be busy at big jobs. After all, fortunes are being made every year in the feed business—the money is there and it is easy to find those who have made it. It is just as easy to find others who are on the short side, and we will analyze the reasons later on.

Do you ever stop to think of the changes that have taken place in the past 25 to 50 years? Here are a couple of good ones. See if you can't visualize from these, the remarkable changes in almost every industry. A recent issue of the *Cleveland Plain Dealer* published a cartoon of an old man making a "stump" speech—back in 1878. He was telling the other village powers this "If you would have our fair village grow and take its just part in the rich years that are before us, we gotta have more hitchin' posts." Just a few more hitching posts was his idea of putting the town over big. The upper portion of this same cartoon showed the same town, 50 years later, but there were steel hitchin' posts to tie the air horses to—like the huge Zeppelin that brought Dr. Hugo Eckener over here from Germany.

Here is another one, close to our subject, that has transpired in just about the same length of time. In 1883 I saw choice wheat bran, made in the mills at Minneapolis, blown into the Mississippi River. I could get all I wanted, just by hauling it away. This was fancy bran with no mill run screenings in it either. Talk about fillers for feed—that's what we called bran in 1883. We had to beg our customers to take it, and we sold it delivered in Chicago as low as 25 cents to 50 cents per hundred pounds. Last week I bought some of the same kind of bran in a Cleveland hotel, put up in a nice little individual package. Here is the same bran—done up as a fancy breakfast food and we pay 25 cents for a serving. Deducting possibly 20 cents for cream and service, we pay 5 cents for two ounces of bran, or \$40 per hundred pounds, \$800 per ton, so you see in less than 50 years science, system and service have changed a supposedly worthless product to a value far greater than the original product from which the bran came.

Science, food and feed system engineering have discovered a wonderful value in bran, and the same high values are being discovered in by-products of all kinds today, which not so long ago were wasted. I believe the greatest field is in the feeding of animals and poultry. That's where much of our quality food is first developed.

You know we all feel that we can say things at home that might start fireworks some place else, so first I want to prove my right to call this state, and even this city my home. I am a "Buckeye"—born in the now noted Brunson haunted house in North Fairfield, Thuron County, Ohio.

There was another man born in Marietta, Ohio, on the same Sunday morning, August 27, 1865. I moved to Chicago—he followed. He moved to Evanston—I followed. His business some of the time is at Monroe and La Salle Streets and mine is at Monroe and Dearborn. I guess he got ahead of me in one thing, however, for he was elected vice-president of the United States. My record as a Republican dates back to my first vote in 1886. That's as far back as he can go too. Still I can go him one better for my father was a Republican and was postmaster of the House of Representatives at Columbus, Ohio, in 1860, so you must admit I am right at home in Ohio, even though I have been away a good while and busy in working at my subject, "Making a Fortune in the Feed Business."

My first important work was on the farm at North Fairfield. I was in the dairy business, in fact I lived on milk altogether for nearly two years. Here is actual evidence—my first pair of boots, a swell pair of red top patent leather boots that fit me when I was in the milk business in 1866 and 1867. I have been busy pushing the milk business ever since.

I know you have grown in the grain business like every other line—more elevators, better machinery, etc., but your business is limited. You are handling a line of raw material that must be moved in volume to make anything. Your only asset is excellent service, good judgment of quality and personality. These are what hold the trade. If you stop doing business you are quickly forgotten. You know there would not be one call for your No. 2 Yellow corn, because the buyer can get the same thing from 50 others. To be sure yours is graded, but it bears no brand or trademark.

Rendering real service in the grain business is of considerable value, but your place is being filled by the grain departments of the feed manufacturing concerns of today. There are a good many feed concerns that have first class facilities for handling and storing 500,000 to 1,000,000 bushels of grain, in addition to all other commodities.

Your service in handling grain for the feed manufacturer is a good deal like the property man in a show. You furnish the grain, but the manufacturer who makes the scientific feed gets the credit. His scientific feed makes the animals and poultry thrive better, and produces more meat, milk and eggs. In other words the feed manufacturer is riding around in the ring, in view of all, with his branded feeds emblazoned on every side. You are back in the tent, carrying feed and water to the elephants. You see there are two kinds of "hitching posts" in every kind of business.

Don't think I am opposed to the grain man—we need all of the A 1 grain companies who are rendering a real service. I have been in the grain business on the Chicago Board of Trade, and understand some of the conditions.

We have all heard the machinery salesmen telling how easy it is for the grain man who buys grain of the farmers, to get into the feed business. He says that all you need to do is buy one of their mills and batch mixers and go after the business—forget about formulas, branded bags, state licenses, and all that. The farmer tells you what he wants, you simply grind and mix the feed for him. You are simply working for the farmer—making what he tells you to and you don't know whether the feed is any good or not. This is all wrong, according to my judgment. This making a different feed mixture for every farmer from articles that you must purchase in lot lots, runs the cost up. You never know what articles to buy when the market is low, because someone else is dictating the formulas. Then too, the farmer is always changing his formulas. When the price of the different products change, you hold the bag on the high priced materials on hand. Another thing—the feeder upsets his stock when he keeps changing to different mixtures of feed. If you were making your own line of feeds, you would know what articles were included, and you could buy to advantage.

If you have any idea of going into the feed business, you should go into it right, or act as a distributor for some good manufacturer who will supply the best feeds that science and machinery can produce.

The farmers and feeders are learning that not all feed is the best feed. They see that the formulas supplied them from general sources are often out of line—not because the articles named are not first class, but because the one supplying them has no knowledge of the market situation, the sources of production, cost of milling some formulas as against others and many other conditions. All of these add to the cost.

The modern plant of today is turning out 20 to 25 different feeds, all made expressly for certain growth and production.

Designing, building and equipping an up-to-date feed plant to operate economically requires:—

First—A full set of at least 20 high quality tested formulas, complete to fit the requirements of the district you are to serve. Careful consideration should be given to see that all articles most available in your locality be used in as large amounts as possible, in the makeup of your quality feeds.

Second—Specific machinery must be chosen to make every one of these feeds as near the proportions required to make an average day's run of assorted feeds.

Third—A complete system should be planned, as many of the articles that are milled are separated and used in varying proportions in as many as eight different feeds. In other words, a well balanced mill is one where all the departments co-operate and the grinding and mixing equipment is so arranged as to prevent the mixing department standing idle, waiting for some other departments to catch up.

Fourth—The purchasing department must be careful to see that every article required in the feeds is on hand and careful attention must also be given in the sales department to prevent swamping the mill with unprofitable orders, as in the manufacture of certain feeds there is considerable by-product, like corn feed meal, that must be disposed of in other feeds, or the profits in the original sale is lost.

This "Making a Fortune in the Feed Business" takes considerable study or you will not get in on the real velvet. Just take for instance one good feed, and start with the purchase of all the raw materials, the milling of each article, the kind of machinery best adapted for the mixing, and then be able to tell the feeder how to use it. Don't forget, you must produce more in growth and production than the feeder is securing from his method or you are through.

The Farm Bureau, like the G. L. F. and Eastern States Federation, find it cheaper and better to have a regular plant and do business on a regular business basis. Other farm bureaus are having a full line of feeds manufactured for them, and they do the distributing.

I can name plants that are turning out over 200 40,000-pound cars of feed per week. That would keep some of your elevators busy on grain going in one side of the elevator and out of the other—to say nothing of 10 different kinds of feed in each car and some single feeds containing 14 different articles. That sounds like a lot of detail, but we have machinery now that will measure accurately as many as 20 different articles for one feed, including molasses and will produce 20 bags per minute, accurately weighed, sowed and delivered into a car, ready for piling.

We have new molasses machinery that will maintain the heat of molasses regulated by thermostatic control and will spray into a molasses feed mixer, any amount from six pounds to 350 pounds per minute. By pressing a button you can trip the test gates and get an exact weight sample of every article including the molasses.

The production received from the finest feed, in

conjunction with good breed and first class care, will revolutionize the farm methods of feeding, I feel sure.

I want to show you a layout of a modern feed manufacturing plant having a capacity of 15 to 25 cars of assorted feeds in 10 hours. (Plans were produced by the speaker to demonstrate the layout).

Bennett Chappels, vice-president of the American Rolling Mill Company, Middletown, Ohio, then spoke on "Co-operation and Organization."

A brief discussion followed this talk, after which the meeting was adjourned.

ANOTHER IOWA DISTRICT MEETING

At a meeting held last month in Rockwell City, Iowa, at the Bower Hotel, about 60 Iowa grain men attended. This was a district meeting of the Western Grain Dealers Association, and the main matters discussed were crop conditions, the prospects for crops from the different territories and the probable damage that would show up in the corn crop on account of rains and severe winds. The Bower Hotel is being managed by Joe Hunt, formerly of the Bennett Grain Company, Storm Lake office, and he extended all possible courtesies to visiting grain men, demonstrating that he could do as well in the hotel business as he had in the grain business.

SOUTH DAKOTA MEETING PLANNED

Tentative plans for the annual convention of the Farmers Elevator Association of South Dakota, December 11, 12 and 13, have been announced. The sessions will be held at Mitchell, S. D., and proceedings will open on the first day with the call to order by President A. L. Berg. Addresses scheduled to occur the afternoon of the first day include: "Protein," by William F. Schmaidt, marketing specialist, Brookings, S. D.; "The Possibilities and Limitations of Terminal Grain Marketing," by W. J. Kuhrt, senior agricultural economist, Washington, D. C.; and a talk by P. L. Betts, sales manager Equity Union Creameries. There will be an executive session the evening of the first day.

The topics assigned for the second day are: "Crop Improvement Plan," by H. R. Summers, secretary, Northwest Crop Improvement Association; "Cost of Operation," by Mr. Post, Agricultural College, Brookings, S. D.; and a talk by F. S. Betz. In the afternoon of the same day J. W. Shorthill, secretary Farmers National Grain Dealers Association, will speak, and so will E. L. Kreger, manager of the Iowa Farmers Co-operative Brokerage Department. Discussion by managers will follow. A banquet will be held the second night. The third morning there will be two addresses, and the afternoon will be given over to completion of routine business, including reports of committees, officers, and such matters.

FEED CONTROL OFFICIALS MEET

At the Hotel Raleigh, Washington, D. C., November 1 and 2, the Association of Feed Control Officials held its twentieth annual convention. On the first day the Executive Committee met, and there was a session which was closed to all except members.

Among the important speakers at the convention were Dr. E. B. Forbes, director of the Institute of Animal Nutrition, Pennsylvania State College; W. E. Suits, president of the American Feed Manufacturers Association and vice-president of The Quaker Oats Company; Lynn Townsend, secretary of the New England Retail Grain Dealers Association; and several Government experts.

The following officers were elected for the coming year: G. S. Fraps, College Station, Texas, former vice-president, who succeeds P. H. Smith, of Amherst, Mass., as president; A. W. Clark, New York, vice-president; L. E. Bopst, College Park, Md., re-elected secretary-treasurer. The Executive Committee consists of the president and secretary, G. L. Bidwell, Washington, H. R. Kraybill, La Fayette, Ind., and J. C. Mohler, Topeka, Kan.

The report of the Executive Committee included a number of recommendations, later adopted by the meeting, and among them were the following:

Definitions regarding meat scraps and meat meal, which had been tentative since last year, were made official.

It was also decided that raw bone meal should be defined tentatively as a dried, ground product suitable for animal feeding, obtained by cooking bones in water at atmospheric pressure. It must contain not less than 23 per cent protein. Steamed bone meal was defined as a dried, ground product suitable for animal feeding, obtained by cooking bones with steam under pressure. It must contain not less than 18 per cent protein. Special steamed bone meal was defined as a dried, ground product suitable for animal feeding, obtained by cooking

bones with steam under pressure in the process of obtaining gelatine or glue.

It was voted to make official the tentative definitions of Alfalfa products, several minor changes being made in the wording and order of the definitions. The definition for Alfalfa meal is as follows: Alfalfa meal is the product obtained from the grinding of the entire Alfalfa hay, without the addition of any Alfalfa stems, Alfalfa straw or foreign material or the extraction of leaves. It must be reasonably free from other crop plants and weeds, and must contain not more than 33 per cent crude fiber.

Alfalfa leaf meal was defined as the ground product consisting chiefly of leafy materials separated from Alfalfa hay or meal. It must be reasonably free from other crop plants and weeds, and must not contain more than 18 per cent crude fiber.

Definition for Alfalfa steam meal: The ground product remaining after the separation of the leafy material from Alfalfa hay or meal. It must be reasonably free from other crop plants and weeds.

A "table scrap" definition was tentatively adopted, following the recommendation of the executive committee, and minor changes were made in the wording of the "processed garbage" definition.

A tentative definition of "milk sugar feed" was also adopted, this feed being a byproduct of cheese manufacturing.

It was moved and carried that a committee be appointed to study malt grains.

It was also decided to raise the fees of the association to \$10, and fix a price for copies of the definitions that would cover the cost of their printing.

Another decision made was that a committee be appointed to study uniform size of labels, since this has caused some trouble to manufacturers in certain places.

The association agreed to consider a proposal of the National Association of Departments of Agriculture to hold the former's meeting next year, not concurrently, but in the same week and the same city as that of the latter.

The only entertainment feature was a theater party on the night of the first day. The meeting adjourned with the consensus that much beneficial interchange of ideas had been effected.

CONVENTION CALENDAR

December 11-13.—Annual convention of the Farmers Elevator Association of South Dakota, at Mitchell, S. D.

December 18.—Business meeting of the Farm Seed Association of North America, at the Stevens Hotel, Chicago, Ill.

January 23-25, 1929.—Silver anniversary convention of the Iowa Farmers Grain Dealers Association, at Fort Dodge, Iowa.

February 5-7.—Annual meeting of the Farmers Grain Dealers Association of Illinois, at Joliet, Ill.

February 5-7.—Eighteenth annual convention of the North Dakota Farmers Grain Dealers Association, at Fargo, N. D.

February (date not named).—Semi-annual meeting of the Eastern Federation of Feed Merchants. (Date to be set later).

February (date not named).—Annual convention of the Grain Dealers National Association, at Peoria, Ill.

LEGISLATION AND THE GRAIN TRADE

There have been at least two histories of the Chicago Board of Trade which are usually used as reference in questions dealing with the Board or its personnel. But Benjamin F. Goldstein of Chicago has made a new contribution to the subject from the standpoint of state legislation and legal decisions as they refer to the grain trade, transportation and warehousing, in his book just off the press of the Macmillan Company, New York, entitled "Marketing: A Farmers Problem", a volume of 330 pages.

Mr. Goldstein served as special counsel for the Illinois Legislative Grain Marketing Investigating Committee, appointed by the legislature to consider the proposal of the Chicago Board of Trade to form a warehousing corporation, and which committee ultimately turned down the Board's application for a license. The exhaustive study by Mr. Goldstein made as counsel for the committee, resulted in the book before us, and was largely responsible for the committee's action.

It is somewhat difficult to view a controversial subject of this kind without prejudice, but the obvious care with which Mr. Goldstein has investigated his subject, the wealth of references he uses, there are 882 of them, and the list of authorities cited, 12 pages in all, gives evidence of the labor involved, and disarms suspicion that the book is prejudicial.

The latter part of the book is concerned with the Grain Marketing Company and the suits growing out of the settlement of its affairs. These bear directly on the warehousing problem of today and are treated at length.

It is quite certain that all members of the Board

will not agree with the conclusions reached by Mr. Goldstein in his interpretation of the evidence submitted. I think no one will quarrel with the facts themselves as presented. In fact ultimate conclusion is not attempted by the author, but he recognizes a condition that needs the constructive thought of the whole trade when he says:

"The history of marketing grain through the terminal markets of the United States reveals that machinery is being used therein, which was established to meet conditions diametrically opposed to those now existing and which no longer prevail; that through the operation of obsolete methods of marketing there has been built up a system of duplicated effort, involving a multiplicity of unnecessary charges and impeding the direct progress of the distribution of farm products to the consumer. It is therefore timely now to reconsider the existing tolerated concepts of the fundamentals of distribution of grain in the light of critical analysis."

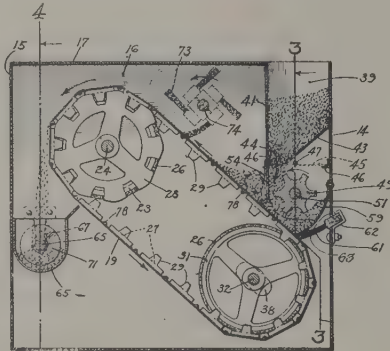
Mr. Goldstein has so thoroughly covered his subject and the book is so rich in references that it should have a permanent place in the library of every terminal market dealer.

GRAIN TRADE PATENTS

Bearing Date of June 26, 1928

Grain separator.—John A. Perkins, Minneapolis, Minn. Filed December 3, 1923. Renewed December 24, 1925. No. 1,675,048. See cut.

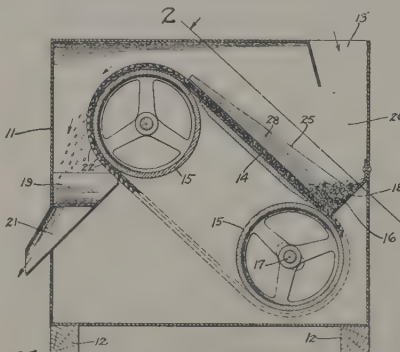
Claim: A separator comprising a frame, an inclined belt supported upon said frame, the outer exposed surface of said belt having longitudinally extending groups of different sized indentations progressively arranged across the face thereof, with the smaller indentations adjacent the receiving side of the belt,



a hopper, an adjustably mounted slide, a feed roll, and means for horizontally distributing the material across the indented surface of said belt, and means for discharging the coarse material and holding the finer material in said separator until a complete separation thereof has been obtained.

Grain separator.—John A. Perkins, Minneapolis, Minn. Filed October 5, 1925. No. 1,675,049. See cut.

Claim: A machine of the class described comprising a retaining means for the material to be separated, an endless belt having flexible pockets in its outer surface the walls of which are thin and substantially of uniform thickness throughout and always closed



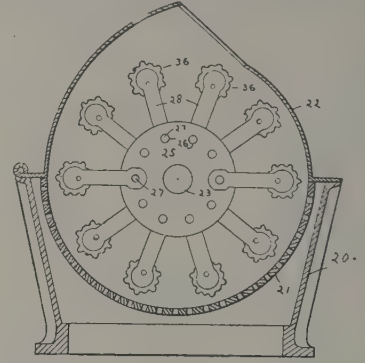
at the inner side of said belt and open at the outer side thereof and adapted to receive certain kinds of material from the co-mingled body in said retaining means and adapted to be distended and assume another shape to discharge the material at a point higher up than the point where it is received, but on the same side of the belt as the point of reception of the material.

Bearing Date of July 3, 1928

Grinding mill.—John Mursch, Utica, N. Y., assignor, by direct and mesne assignments, to Buffalo Hammer Mill Corporation, Buffalo, N. Y., a corporation of New York. Filed June 20, 1927. No. 1,675,658. See cut.

Claim: A grinding unit for mills comprising a supporting member revolvably mounted, a pair of links pivotally connected to the supporting member, an intermediate member eccentrically and movably mounted on said links near their outer ends, a hammer having a plurality of grinding faces and revolvably mounted on said intermediate member, and

means mounted on said intermediate member and engaging said hammer and adapted to positively hold said hammer relative to said intermediate member with any one of its grinding faces in radial alignment

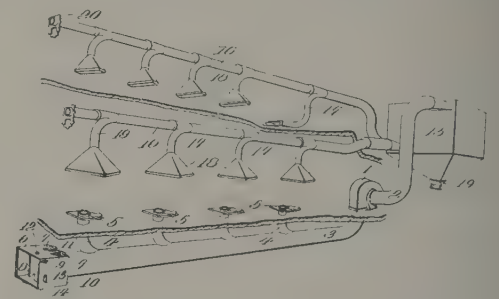


with the heavy side of said eccentrically mounted intermediate member whereby said desired face is yieldingly held in operative position.

Bearing Date of July 10, 1928

One-fan combined dust collecting and air supply system for pneumatic separators and cleaners.—Henry Moore Sutton, Walter Livingston Steele, and Edwin Goodwin Steele, Dallas, Texas. Filed December 3, 1923. Renewed May 18, 1927. No. 1,676,969. See cut.

Claim: An air supply for a plurality of pneumatic separators and a dust collector, comprising a fan having a greater capacity than that required by the system, an air supply conduit connected with the outlet end of the fan having a plurality of connec-



tions with the separators, a dust collector conduit having a plurality of dust collectors, a dust separator connected with the dust collecting conduit, the suction side of the fan connected with said dust separator, and automatic means for controlling the amount of air pressure within the said air conduit, whereby a single fan operates a plurality of suction devices and supplies air to a plurality of separators.

Bean separator.—Curran S. Benton, Port Huron, Mich. Filed April 18, 1927. No. 1,677,015.

Bearing Date of July 24, 1928

Process for treating seeds to augment their cultural value.—Alexander Carr Bennett, Fairfield, New South Wales, Australia. Filed December 15, 1926, and in Australia March 26, 1926. No. 1,678,418. See claim.

Claim: A process of augmenting the cultural value of agricultural seeds, which consists in soaking them in water, spreading them while damp in a layer upon an earthed plate and rolling over them for a period of 5 to 15 minutes more or less, a vacuum tube which is connected to a source of high frequency electrical current, substantially as described.

Bearing Date of August 14, 1928

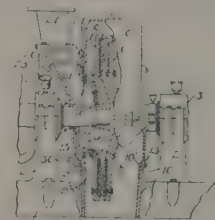
Grain car door for box cars.—Alfred Gillingham and Edmund Bjork, Regina Beach, Sask., Canada. Filed September 7, 1927. No. 1,681,113.

Bearing Date of August 28, 1928

Corn sheller.—Albert E. Gilman, Ottawa, Ill., assignor to King & Hamilton Company, Ottawa, Ill., a corporation of Illinois. Filed December 1, 1927. No. 1,682,374.

Attrition mill.—Richard S. Iglehart, Springfield, Ohio, assignor to The Bauer Bros. Company, Springfield, Ohio, a corporation of Ohio. Filed March 23, 1927. No. 1,682,128. See cut.

Claim: In an attrition mill, a rotatable grinding head, a drive shaft for said head, a rotatable ring secured to said head, a second stationary ring co-operating with said movable ring, a spout leading to the

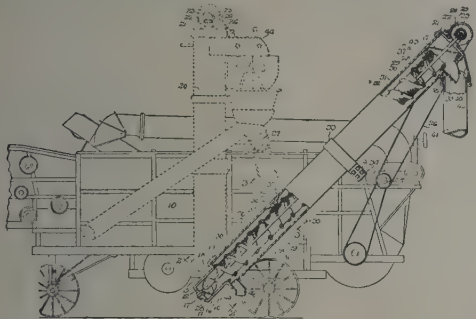


center of said head, said spout consisting in part of a removable portion divided vertically through which said shaft passes, the sections of said removable portion being extended to a point above the highest point of said rings so as to expose the entire rings when said sections are removed.

Bearing Date of August 7, 1928

Combined grain cleaner and elevator.—Daniel W. Detwiler, Rosebud, Alta., Canada, assignor to Western Steel Products, Ltd., Winnipeg, Canada, a corporation. Filed July 23, 1925. No. 1,679,516. See cut.

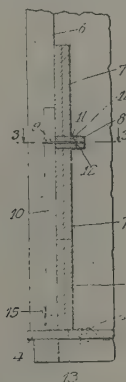
Claim: In an apparatus of the class described, a combination with a boot having an aperture therein through which the grain is received and having a main cylindrical portion in the bottom of which is a bearing, of a cylindrical casing secured at its lower end to the upper end of the cylindrical portion of the boot, a cap for the top of the casing, a screw conveyor shaft journaled in the bearing in the bottom of



the boot and in the cap, means for rotating the shaft, a conveyor helix secured to the shaft and having its lower end co-operating with the boot, a cylindrical screen surrounding and secured to the helix above the boot, a plate extending transversely of the casing towards the upper end thereof and through which plate the upper end of the conveyor helix extends, and a spout connected with an opening in the side of the casing above the plate.

Grain door for box cars.—Joseph A. Schmitz, Chicago, Ill. Filed March 26, 1927. No. 1,679,880. See cut.

Claim: A grain door for box cars comprising a series of boards extending horizontally across the door opening, a brace bar removably secured at its lower end to the floor of the car and extending up-



wardly and overlapping said boards, a horizontal cross bar intermediate the edges of adjacent boards, and means detachably connecting the brace bar to the cross bar.

Bearing Date of September 18, 1928

Grain stowage device.—John Cromie Dill, Vancouver, B. C., Canada. Filed April 7, 1926. No. 1,684,478.

Bearing Date of September 25, 1928

Machine for treating grain.—Wallace A. Rogers, Anoka, Minn. Filed May 26, 1926. No. 1,685,179.

Combined grain door strip and side door post protector.—Sylvester L. Joiner, McGregor, Texas. Filed March 5, 1927. No. 1,685,197.

Bearing Date of September 11, 1928

Grain bin feed.—Ole F. Aplin, Culbertson, Mont. Filed February 26, 1927. Serial No. 1,684,338.

Bearing Date of October 9, 1928

Art of elevating grain.—Carl Brocinski, Mauston, Wis. Filed November 13, 1924. No. 1,686,793.

Bearing Date of October 23, 1928

Process of cleaning threshed cereals.—Alberto Altamirano, Mexico City, Mo., assigned to Moises Solana, Mexico City, Mexico. Filed November 13, 1925, and in Mexico December 24, 1924. No. 1,688,678.

Treatment of seed.—August Klages, Magdeburg-Sudost, Germany. Filed May 17, 1926. No. 1,688,720.

Oat sprouter.—Joseph Wastak, Chicago, Ill. Filed February 28, 1927. No. 1,688,407.

Bearing Date of October 30, 1928

Grain separator.—Andrew E. Rothgarn, Minneapolis, Minn., assignor to Samuel C. Clow, Minneapolis, Minn. Filed April 12, 1926. No. 1,689,972.

THE only grain to be shipped from Houston during October of this year was 30,000 bushels barley. DURING October of this year 1,982,566 bushels of wheat were shipped from Galveston as compared with 928,000 bushels last year; 490,000 bushels barley, compared with 125,000 bushels last year.

MONTANA FIRM ASKS NEW RYE RATE

The Farmers Grain & Trading Company of Westby, Mont., has filed a complaint with the Interstate Commerce Commission, asking that reasonable rates on rye from its elevator in Westby Township, N. D., to Superior and Itasca, Wis., and to Duluth and Minneapolis, Minn.

Reparation is asked for and the Minneapolis, St. Paul & Sault Ste. Marie Railway is made defendant.

SOO GRAIN VOLUME HEAVIEST RECORDED

Government officials declared last week that the grain and ore traffic at the Soo locks promises to exceed the volume noted for any other year. The season's shipments so far total about 270,000,000 bushels of wheat and 48,000,000 tons of iron ore.

With about a month left before lake navigation ends, it is expected that freighters will carry 100,000,000 more bushels of wheat, thereby pushing the total up 38,000,000 bushels over the record last year.

The October report lists 25,500,000 bushels of grain other than wheat, as shipped through the locks.

MORE INSPECTION TIME URGED

The Chicago Board of Trade has filed a complaint with the Interstate Commerce Commission requesting an order requiring the railroads to establish reasonable rules and charges on grain from all points in the United States consigned and inspected at Chicago. The Board of Trade represents that the free time allowed under the present demurrage rule for disposition of grain, seeds, grain screenings and seed screenings, after official inspection under the Grain Standards Act, begins at an unsuitable hour for transactions incident to sale on the exchange floor.

Under the present demurrage rule free time expires at six p. m. of the day that inspection is reported by the inspection authorities on or before 11 a. m. Trading on the exchange begins at 9:30 a. m. and closes at 1:15 p. m. except on Saturdays, when the closing hour is 12 o'clock noon.

RIVER TRAFFIC—A HINT OF WHAT IS TO COME

Foretelling the future when the Mississippi will once more attain its place as a highway of traffic and trade, a shipment of grain has been made from Galva recently by this route. W. F. Reynolds who operates the grain elevator near the Burlington depot, shipped a few days ago 2,800 bushels of barley, making two cars, to Burlington. At that city it was transferred to barges and taken down the Mississippi to New Orleans, where it began a long ocean voyage to Germany.

It is presumed that its ultimate form will be a liquid one.

The barley was above the average for this year's crop, as the barley produced this year has been mostly of poor quality.

Mr. Reynolds states that this is the first time in his experience that he has made a shipment in this way direct to Europe.

The proposed waterway system will serve the Mississippi valley in this manner, the route leading from Chicago, by way of Peoria to the Mississippi. Galva people can send their grain to the latter city or to Burlington for transportation to New Orleans, and the residents of the entire valley will be able to compete with the eastern states.—Galva (Ill.) News.

NEW RECONSIGNMENT RULE IN CHICAGO

The Chicago Board of Trade advises that the following rule becomes effective December 1, 1928, at Chicago:

"Diversion or reconsignment from tracks of elevators, mills, warehouses or any industry handling grain, grain products and (or) feed commodities, as shown on pages 10, 11, 12 and 14 of tariff, as amended, after carload shipments of such commodities have been actually or constructively delivered to the receiving track of said industries, will be subject to the through rate, reshipping or proportional rate, as the case may be, properly applicable to such shipments, plus a reconsigning charge of \$6.30 per car.

"Diversion or reconsignment, in accordance with the provision of the above rule, will only apply when authorized by the Central Inspection and Weighing Bureau."

This rule does not affect grain ordered from in-

spection tracks. The rule applies only on shipments reconsigned from industries, without being unloaded, to points outside of the switching limits under joint through or reshipping rates, and such reconsignments are subject to an additional charge of \$6.30 per car. The above rule is published as a part of the Chicago District Transit Tariff, and orders for such reconsignments must be handled through the Transit Bureau.

It is intended that the same rule as given above for the Chicago District will be published to apply throughout the country generally, according to J. S. Brown, manager of the Chicago Board of Trade Traffic Department.

RECENT JAY BEE SALES

The following sales are reported by J. B. Sedberry, Inc., Utica, N. Y., of the "Jay Bee" feed mill:

West Side Roller Mills, West Side, Iowa, one No. 3 S. D. C.; J. M. Walker & Son, Middleton, Ind., one No. 3 T with fan; Elmer Zuck, Lenark, Ill., one No. 3 S. D. C.; W. M. Burleson, Port Allegheny, Pa., one No. 2 U. D. C.; S. R. Yantis Manufacturing Company, Fulton, Mo., one No. 3 U; New Paris Coal & Feed Company, New Paris, Ind., one No. 3 S. D. C.; R. J. Luse, Angola, Ind., one No. 3 UX; Stevedore Grain & Coal Company, Greenville, Ohio, one No. 3 UX; Augst Bros., Fayette, Ohio, one No. 5 T with fan; P. W. Davis, Leipsic, Ohio, one No. 3 S. D. C.; M. F. Roberts & Son, Westhart, Mo., one No. 2 T with fan; Walter Schneider, Louisville, Ohio, one No. 2 S. D. C.; Farmers Mill, Dayton, Tenn., one No. 3 UX; Lyon & Greenleaf, Wauseon, Ohio, one No. 3 S. D. C.; Illinois Produce Company, Sewanee, Ill., one No. 2 S. D. C.; Mauston Farmers Company, Mauston, Wis., one No. 3 S. D. C.; Poast & Dawson, Bryan, Ohio, one No. 3 S. D. C.; N. W. Mattix & Son, Frankfort, Ind., one No. 3 UX D. C.; Marshall Feed & Grain Company, Marshall, Ind., one No. 3 S. D. C.; Fred Diefendorf & Son, Sharpsville, Pa., one No. 2 UX D. C.; City Mill & Feed Company, South Whitley, Ind., one No. 3 UX; Clyde Elder, Mark Center, Ohio, one No. 3 S. D. C.; R. J. Krop, Ely, Iowa, one No. 4 T with fan; Walker Bros., Chambersburg, Pa., one No. 2 T with fan; Sevierville Mills, Sevierville, Tenn., one No. 2 U; Consumers Feed & Supply Company, Warren, Ohio, one No. 2 S. D. C.; Millstadt Milling Company, Millstadt, Ill., one No. 2 UX; E. J. Wilson, Dodgeville, Wis., one No. 2 S. D. C.; P. W. Walker, Littlefield, Texas, one No. 4 W with fan; Bridgeville Flour & Feed Mill, Bridgeville, Del., one No. 2 S. D. C.; J. A. Long & Co., Union City, Ind., one No. 2 T with fan; Jefferson Milling Company, Jefferson, Ohio, one No. 2 S. D. C.; Hutchinson Gin Company, McAlister, Okla., one No. 4 with fan; Shandon Milling Company, Shandon, Ohio, one No. 4 W with fan; F. M. B. A. Elevator Company, Highland, Ill., one No. 3 S. D. C.; W. A. Adams & Son, E. Claridon, Ohio, one No. 2 S. D. C.; J. A. Rudabaugh & Son, Rogers, Ohio, one No. 3 T with fan; F. B. Lash Flour mills, Farmersburg, Ind., one No. 3 UX; Hirsch Grain Company, Tripp, S. D., one No. 3 S. D. C.; L. C. Douglass Company, Jefferson, Ohio, one No. 3 UX D. C.; Waynesfield Grain Company, Waynesfield, Ohio, one No. 3 S. D. C.; Beacon Milling Company, Cayuga, N. Y., one No. 4 W. D. C.; Nutrena Feed Mills, Kansas City, Mo., one No. 4 W. D. C.; Chadron Flour Mills, Chadron, Neb., one No. 4 W. D. C.; Humboldt Elevator Mills, Humboldt, Kan., one No. 4 W. D. C.; H. N. Jensen, Esterville, Iowa, one No. 4 W. D. C.; Pierron Co-operative Equity Exchange, Pierron, Ill., one No. 3 S. D. C.; Wilson Shirley Grain Company, Blountsville, Ind., one No. 3 UX; Kirk Feed Company, Greenfield, Ind., one No. 2 T with fan; Farmers Co-operative Grain & Supply Company, Farwell, Neb., one No. 3 UX; W. H. Menaugh, Mongo, Ind., one No. 2 S. D. C.; Salamonie Roller Mills, Warren, Ind., one No. 3 T with fan; Midland Flour Milling Company, Kansas City, Mo., one No. 4 W. D. C.; Ball Milling Company, Janesville, Ohio, one No. 3 S. D. C.; Crandall Milling Company, Crandall, Ind., one No. 2 UX; Eberts & Bros., N. Vernon, Ind., one No. 2 S. D. C.; H. D. Delwert, Flatrock, Ind., one No. 2 UX D. C.; Morrow Feed & Supply Company, Morrow, Ind., one No. 3 UX D. C.; Lipscomb Grain & Seed Company, Springfield, Mo., one No. 4 W. D. C.; Clayton Milling Co., Clayton, Ind., one No. 3 S. D. C.; Jensen Milling Company, Jensen, Neb., one No. 2 U; Cannelton Flour Mills, Cannelton, Ind., one No. 3 UX; White & Ackerman, Peasey, Iowa, one No. 3 S. D. C.; O. L. Burt Grain Company, Wilke, Iowa, one No. 3 UX; Osgood Grain Company, Osgood, Ind., one No. 2 S. D. C.; Washington County Milling Company, Prairie Grove, Ark., one No. 2 UX; E. A. Hudson Feed Company, Mason, Ohio, one No. 2 S. D. C.; Farmers Feed & Coal Company, Bloomington, Ind., one No. 3 UX; Chas. F. Naber & Co., Alexandria, Ind., one No. 2 S. D. C.; Rowan Lumber & Grain Company, Rowan, Iowa, one No. 3 S. D. C.; Moore Grain Company, Greensburg, Kan., one No. 2 U; John Connolly, Fairplay, Mo., one No. 2 T with fan; Baird Milling Company, Cassville, Mo., one No. 2 UX D. C.; Buckeye Cereal Company, Massillon, Ohio, one No. 3 S. D. C.; Cement Milling Company, Cement, Okla., one No. 3 UX.

THE manager of a mutual hail insurance company in Regina estimates that hail insurance companies will have to pay out nearly \$2,500,000 as a result of hail storms in the province of Saskatchewan, states a report from Trade Commissioner J. Bartlett Richards. Judging from the percentage of damage listed in claims sent in the insurance officials believe that the total hail damage to date may amount to as much as \$10,000,000, taking into consideration the farmers who were uninsured and under-insured. This estimate is generally considered somewhat exaggerated, and in any case represents an inconsiderable proportion of the total grain and produce crop.

FIELD SEEDS

SEED DEALERS TO MEET

Members of the Western Seedsmen's Association have been notified of the fall meeting which will be held on November 24 at Kansas City, Mo. Max Wilhelmi is president and G. W. Cummings, Sioux City, Iowa, secretary.

FORTY-SIX VERIFIED OREGON DEALERS

There are 46 seed dealers in the United States who are handling verified-origin Alfalfa seed. The list, which was made public by the United States Department of Agriculture, may be secured from the Department. Fifty-six applications were made for enrollment in the service but 10 were either withdrawn or not accepted.

The dealers are expected to verify, as far as possible, every lot of Alfalfa seed handled by them. Verification, this year, it will be remembered, is limited to Alfalfa seed.

SEED DRIER PROVING SATISFACTORY

Ten Wisconsin seed growers are using satisfactorily the seed corn drier invented by F. W. Duffee and A. H. Wright, members of the staff of the Wisconsin College of Agriculture. Those who have used the drier say that it is giving them a better quality seed corn at a lower cost than when they dried it by other methods.

The drier resembles an ordinary grain bin and hot air is forced through the corn in the bin, the direction being alternated at intervals so the corn will be thoroughly dried in all parts of the bin.

SEED COUNCILS FOR TWO STATES

As a result of the meeting of October 10, of men interested in seed problems, the Minnesota Seed Council was formed. J. W. Evans of Montevideo, Minn., was elected president; L. M. King, Minneapolis, Minn., vice-president; R. F. Crim, University Farm, St. Paul, secretary.

Missouri seed men also called a meeting and organized the Missouri Seed Council, which includes representatives of the state, Board of Agriculture, the College of Agriculture and seed merchants. The meeting at which the council was organized was called at Columbia, Mo., on October 24, and at it were discussed many subjects of interest to the seed dealer including the legal labeling of field seeds in order to secure more uniform practice.

HOOSIER SEED NEWS

By W. B. CARLETON

Trade with the wholesale and retail seed men in Indiana has been quite active during the past month; in fact the volume of trade has been much larger than it was during the corresponding period of last year. The buying demand has been unusually good, dealers say, for this season of the year. Seed buyers, it seems, have adopted the policy of getting their seeds early fearing that the short crop yields in many cases may mean still higher prices later on in the year.

The J. A. McCarty Seed Company, which has operated in Evansville for the past six years and at the present time is located at 230 Second Avenue, has opened a branch store at 15 Harding Avenue, Terre Haute, Ind., that has been placed in charge of Frank Pritchard, formerly of Princeton, Ind., who is a seed dealer of experience. The same line of feeds, seeds and orchard supplies that the Evansville house carries, is now carried by the Terre Haute store and Mr. Pritchard says the trade outlook in Terre Haute and eastern Indiana is very good at this time of the year.

More than 500 poultry and hog raisers of the tri-state region were invited by the J. A. McCarty Seed Company at Evansville to attend a display and demonstration of feeds and seeds staged at the company's display rooms in Evansville a few days ago.

J. Spirry, who formerly was traveling salesman for the Purcell Seed Company at Evansville and who resigned his position several months ago, has accepted a position as traveling salesman with the Ziliak-Schafer Milling Company of Haubstadt, Ind., with offices and warehouses in Evansville. He is well known to the seed and grain trade in southern Indiana and western and northern Kentucky.

Practically all the farmers in Indiana have sown their wheat at this writing. Many of the farmers report they had some difficulty in getting plenty of good seed wheat this fall. The wheat that was

sown early has come up nicely and the crop is taking firm roots and it appears will be in good shape to stand the cold weather a little later on. The acreage of wheat sown in Indiana this year was not as large as in former years.

Clover hulling in southern and central Indiana has been about finished. The yield was fair this year and the quality of the seed is said to have been very good. The yield of Red and White Clover was good and the Timothy and Alfalfa yield in Indiana this year was very good, the farmers and dealers report.

SMALL CHANGES IN NEW YORK SEED PRICES

By C. K. TRAFTON

During the early part of the period under review it became quite well established that the fall season was at an end in the New York seeds market and thereafter business was confined almost entirely to the birdseed varieties, the field and grass items remaining extremely inactive. The price table shows few and unimportant changes compared with that of last month, a few items being slightly higher and a few others slightly lower.

Timothy slipped off $\frac{1}{4}$ cent, or to $6\frac{1}{4}$ cents during the month, although some still held firmly at $6\frac{1}{2}$ cents. Only a small export business was reported occasionally, but the continuance of foreign interest aroused hopes of larger dealings in the near future. Moreover, further reduction of supplies was indicated by the fairly large clearances on old orders, the month's exports aggregating about 3,900 bags, including about 2,350 to Denmark, compared with a total of roundly 1,040 bags for the preceding month.

Kentucky Bluegrass remained unchanged at $28\frac{1}{2}$ cents for 21 pound seed and $27\frac{1}{2}$ cents for 19 pound seed. Exports showed a small increase, the total being about 400 bags, mostly to Denmark, against about 200 for the month preceding.

Redtop declined 1 cent to 15 cents, reflecting the large crop and carryover, which factors encouraged an indifferent attitude among European buyers. Practically no export business was reported and the clearances for the month were only about 175 bags, against none for the preceding month.

Alfalfa was somewhat of a feature during the month, though not because of any particular activity. The spot basis for domestic seed was advanced $2\frac{1}{2}$ cents to $25\frac{1}{2}$ cents, owing to continued strength in the interior and growing fears that supplies will be inadequate in spite of the carry-over. On the other hand, the high prices resulted in the development of more interest in Argentine seed. One lot of 245 bags was received and this seed was available at $20@21$ cents duty-paid and later at $19\frac{1}{2} @ 20$ cents.

Red Clover remained inactive, but the domestic variety advanced 1 cent to 33 cents, reflecting growing uneasiness regarding supplies. Imported Clover was unchanged at $23\frac{1}{2}$ cents duty-paid, although some sellers might have accepted slightly less.

White Clover remained unchanged at 27 cents in spite of arrivals of roundly 860 bags, against about 95 in September.

Orchard Grass also held steadily at 17 cents although the arrivals jumped to 5,630 bags, compared with 1,680 last month.

BADGER STATE SEED NEWS

By C. O. SKINROOD

The seed markets appear to be rather quiet as is to be expected at this time of the year, but prices of seeds are very well maintained. Prominent handlers here declare that never before in the history of the trade has seed so generally left the farmers' hands. In most lines the seed supply is largely cleared up. The opinion is prevalent that if the seed buying demand pans out as it should, there will be material advances in prices from the present levels as the supplies of seed are so small in general that any kind of persistent buying is bound to have a decisive effect on the market.

The Red Clover supply seems to be largely gone according to Milwaukee handlers. The buying demand has also been better than most dealers looked for in November which is largely accounted as between seasons. There have been no price advances in Red Clover in the last 30 days, but the call for seed has been sufficient to keep the tone of the market from steady to firm.

The Timothy supply left appears to be very limited, the local dealers report. The buying also has been very small.

With the Alsike yields of Wisconsin not much

more than 50 per cent of a normal yield, the seed handlers of Milwaukee declare that the entire crop is practically cleaned up.

Sweet Clover seed yields were smaller than expected. In fact much of the crop of this seed seems to be of low grade quality, so that the supply is further diminished by this influence. The tone of the market is also very firm with buying of considerable volume in recent weeks. The market has advanced in the last 30 days from 25 to 50 cents. In fact this is one of the few seed lines which has gone up during the last month.

The Alfalfa market is reported by Milwaukee seedsmen as about a 75 per cent of a normal yield. Despite the large carry over of this seed from last year the market has been exceptionally strong. There has not been much demand, in fact much of the buying is expected after January 1. Prices have jumped about \$1 in the last 30 days and quotations have a wide range from \$24 to \$30.

The White Clover trade is mostly negligible. Offerings are absent and there is little call for it except from an occasional customer. The Red Clover market is quoted in Milwaukee as around \$31 to \$33, while the Mammoth Clover ranges a little higher—from \$32 to \$34. Timothy is holding mostly at the old price range of \$6 to \$7. Alsike values have not changed materially in the last 30 days with the price largely \$30 to \$33. Sweet Clover is selling largely from \$8.50 to \$10. Alfalfa is quoted mostly from \$24 to \$30 with the exceptionally fine Grimm Alfalfa from the Idaho Blackfoot district running as high as \$35 to \$41. White Clover is dull around \$25 to \$35.

Milwaukee seed dealers report that Wisconsin farmers have saved more seed corn than usual this year. Warned by the scarcity of good seed corn in recent years and the good prices available for any surplus, the farmers are showing greater wisdom and are fortifying themselves with plenty of seed corn. The crop was good in the southern part of the state. Western supplies of seed corn, especially from Nebraska, are also expected to be liberal. The present market is largely nominal as yet, as very little seed corn has gotten into the channels of trade. Prices are quoted around \$1.75 to \$2.25.

Quite a number of seed corn growers in Wisconsin are not worrying about the wet, muggy weather because they have had corn driers in use. Instead of hanging their corn on racks and trusting to the weather to dry it out properly, they have the machine driers. In these devices the corn can be dried thoroughly in about three days, or 72 hours.

L. F. Graber, specialist on Clover and other grasses at the Wisconsin College of Agriculture, has started on a campaign to improve Wisconsin pastures by means of larger seedings of Sweet Clover.

SWEET CLOVER SEED CROP MUCH SMALLER THAN WAS EXPECTED

Sweet Clover seed production this year is nearly 50 per cent smaller than was expected, according to information recently received from growers who had previously reported to the United States Bureau of Agricultural Economics during the first half of September. At that time it was estimated that the crop would be about the same as last year, a somewhat larger acreage offsetting decreases in the yield per acre. However, unfavorable weather conditions at harvest or later cut down production greatly in some of the important districts.

Frosts occurring when much of the seed was immature, heavy rains before and after harvest, and strong winds that shattered much seed were mainly responsible for the losses incurred. The damage done by some of these agencies was not evident until farmers began harvesting or threshing their crop. This is indicated by statements received about November 1, typical of which are the following: In northeastern North Dakota a grower who intended to cut 160 acres said "When we started to cut we saw that only the best part of the field would yield anything, so only cut 100 acres." Another farmer in the same district whose 100-acre field produced only one-half as much seed as he had expected wrote: "We all thought we had a good crop not hurt by frost but it didn't yield except where short and thin on the ground." Other observations made by growers at the time of the harvest were: "Seed crop was frosted before maturity resulting in small yields." "Not worth threshing, so I burned it off." "There was a wonderful stand but was not worth threshing." "The crop froze before ripening and the seed was shelled off by high winds."

Not until some of the seed had been threshed did
(Continued on Page 323)



THE DAKOTAS

The Farmers Elevator Company of Conde, S. D., is making repairs at its elevator.

The Farmers Elevator Company of Frankfort, S. D., has installed a new grain cleaner.

A grain cleaner has been installed for the Farmers Elevator Company of Miller, S. D.

The Moddle & Downey Elevator at Edgemont, S. D., has been bought by J. M. Tucker and C. M. Tucker.

Otto Schmidt has been made agent of the Harvey, N. D., elevator of the Osborne-McMillan Elevator Company.

The elevator of the Logan Grain Company of Burnstad, N. D., has been equipped with motors and a new head drive.

Extensive improvements have been made to the plant of the Farmers Co-operative Elevator Company of Des Lacs, N. D.

Improvements and repairs have been made to the elevator of the King Grain Company at Perella (Northgate p. o.), N. D.

The contract has been let by the Robideaux Grain Company of Parshall, N. D., for the erection of a new 40,000-bushel elevator.

The J. J. Mullaney Elevator at Utica, S. D., has been equipped with some new machinery. Considerable repair work was also done.

The Farmers Elevator at Great Bend, N. D., which was burned early in October, is being rebuilt with capacity of 25,000 bushels.

The Ketcham Grain & Fuel Company, has been incorporated at Madison, S. D., capitalized at \$15,000. The directors are: A. J. Corneyslen, J. L. Ketcham and D. Ketcham.

A 30,000-bushel cribbed elevator is being built at Draper, S. D., for M. King. The new elevator will have one leg and 10 bins, and will be equipped with an air dump and a 15-ton scale.

INDIANA

The coal bins of Cliff Wilson at Merom, Ind., are being rebuilt.

The elevator of the Ridgeville (Ind.) Grain Company has been sold to the Goodrich Bros. and M. E. Snapp.

The Stafford Grain Company of Hope, Ind., has changed from natural gas engine to a 50-horsepower oil engine.

A new sheller and other equipment have been installed by Fitton & Steelman in the plant at New Harmony, Ind.

The Rileysburg Grain Company of Rileysburg, Ind., has installed new shafts and pulleys. Victor Current is manager.

Improvements have been made to the office building and warehouse of the Edward F. Goeke Grain Company at Evansville, Ind.

Virgil W. Moore, surviving partner in the Moore Bros. Company, grain dealers at Kirklin, Ind., has bought the interest of the late Ward Moore in the firm.

The Stephens Elevator at New Harmony, Ind., has been taken over by George Couch & Sons. They have repaired and increased the handling facilities.

The Rich Elevator at Converse, Ind., has been opened by the Keifer Feed & Milling Company. The elevator is under the management of J. E. Grosscost.

The three elevators of the Kinsey Bros. at Liberty Mills, Laketon, and North Manchester, Ind., have been turned over by the Kinsey Bros. to the State Bank of Claypool.

The Argos Hotel at Argos, Ind., has been bought by Herbert Fry, owner of the Meloy Elevator there, and will be moved to the elevator site where it will be made a part of a new grain receiving station.

Samuel Stigler, receiver for the Farmers Co-operative Elevator Company at Brazil, Ind., sold the property at auction on October 15. The real estate, including the old flour mill, elevator and machinery, was sold to Dave Stigler and Isaac Skelton.

Adamson & Kemper have leased the Redkey Grain Company, at Redkey, Ind., owned and operated by Lewis McVey of Redkey. The Redkey

Grain Company was organized years ago as the Redkey Equity Exchange. About six years ago the Equity Exchange was bought by Lewis McVey and John Luzadder.

The Flat Rock Elevator at Flat Rock, Ind., which was leased by George S. Cook of Columbus, is to be continued under the management of the Martin Cutsinger Grain Company of Edinburg, as before. Mr. Cook withdrew his lease of the property.

WESTERN

A new elevator has been built for the O. J. Childs Seed Company at Filer, Idaho.

A new grain elevator has been built at Laramie, Wyo., for the Gem City Grocery Company.

New equipment has been installed in the elevator of the Equity Co-operative Association at Harlem, Mont.

The store of the Clark Grain & Feed Company at Los Molinos, Calif., has been bought by W. H. Macy.

The Kenworthy Grain & Milling Company of Tacoma, Wash., has opened a general grain and feed branch at Buckley, Wash.

Members of the Tacoma (Wash.) Chamber of Commerce have approved the proposed \$500,000 bond issue for the erection of terminal elevators there.

Extensive repairs and improvements have been made to the plant of the Farmers Elevator Company at Brockton, Mont. New legs and other equipment are needed.

The Vera Supply Company, formerly operated by Mr. Rudrud at Spokane, Wash., has been bought by W. R. Messamore, who has been in the grain business at Rosalia, Wash.

S. A. Regan is now associated with the Ontario Grain Company of Ontario, Ore., in the grain and seed business. He was formerly assistant manager of the Pacific Seed House, Salt Lake City, Utah.

The new 100-car capacity bean elevator at Jerome, Idaho, has been put into operation. It was built by the Southern Idaho Wholesale Grocery Company with O. J. Schreffler of Twin Falls as manager.

Capitalized at \$500,000, the Montana Elevator Company of Great Falls, Mont., has been incorporated. C. R. McClave, W. N. Smith, Rodney J. Anderson and Samuel Stephenson and O. W. Belden are interested. The incorporation is merely a renewal of its charter. The company is a subsidiary of the Montana Flour Mills Company.

SOUTHERN AND SOUTHWESTERN

G. W. Johnson has bought the Farmers Elevator Company at Grandfield, Okla.

The elevator of the Powell Grain Company at Duncan, Okla., has been completed.

A grain, flour and feed business has been opened at Lovell, Okla., for H. M. Vander Graff.

A new elevator is being built at Cereal (p. o. Aiken), Texas, for the McAvoy Elevator Company.

The Carhart Grain Company of Panhandle, Texas, has opened a grain and coal office at Levelland, Texas.

The W. K. Shepperd Grain Company has put B. P. Marshall in charge of its branch at Robstown, Texas.

A new corn crib has been built and sheller added to the equipment of the H. W. Cole Company of Welch, Okla.

The property of Saint & Co., Houston, Texas, which was damaged by fire a short time ago has been repaired.

A corn elevator is being erected at Vian, Okla., for C. B. Davis. He is installing corn shelling equipment near the elevator.

The elevator of the Kingfisher Mill & Elevator Company at Kingfisher, Okla., operated by Mr. Pennington has been taken over by Bert White.

A grain, flour and feed business will be handled by W. H. Smith, who has been associated with the Carter Grain Company at Bay City, Texas.

G. C. Hayes has bought the Reiter Grain Company at Sentinel, Okla., which has been operated for the past four years by D. J. Reiter and his son, Henry Reiter. The business will be operated as

the Stapp-Hayes Grain Company. Mr. Stapp has been manager for the Farmers Co-operative Elevator but will resign.

Talmage Abney's elevator at Dalhart, Texas, has been bought by Mr. Cozart of Amarillo. The elevator will be repaired and new machinery installed.

Capitalized at \$5,000, the A. E. Johnson Grain Company has been incorporated at Vernon, Texas. A. E. Johnson, Ruby Johnson and W. Johnson are interested.

The grain house, coal bins and scales of Mrs. C. C. Martin at Dalhart, Texas, have been leased to the Strader Grain Company of which G. D. Adams is manager.

A large brick building, 80x125 feet, is being erected at Plainview, Texas, for the Harvest Queen Mill & Elevator Company. A. G. Hinn is president and general manager.

A modern, ironclad elevator with capacity of 23,000 bushels has been built at Conlen, Texas, for the Blotz, Henneman Seed Company. H. A. Nachtrieb is in charge.

The Tillery Grain Commission Company has been incorporated at Fort Worth, Texas, capitalized at \$25,000. The incorporators are Oscar Tillery, P. A. Tillery and N. Tillery.

W. J. Lawther Mills of Dallas, Texas, have contracted with the Jones-Hettelsater Construction Company for additional grain storage and warehouse of 100,000 bushels' capacity.

The elevator of the Home Grain Company at Lockney, Texas, has been leased by B. Armstrong of Plainview. He will operate a grain business there. Mr. Armstrong was manager of the elevator last year.

IOWA

Bert Reid has bought the elevator of Don McBride at Hamburg, Iowa.

William Johnson of Iowa Falls has bought the Hazeltine & Son Elevator at Rowan, Iowa.

G. C. Bennett has installed an oat huller in the elevator operated by him at New Sharon, Iowa.

The Dillon Farmers Elevator Company has been incorporated at Dillon, Iowa, capitalized at \$10,000.

The elevator at Webster, Iowa, has been bought by W. A. Beinke from the Diamond Lumber Company.

The Farmers Co-operative Grain Company of Randall, Iowa, has installed three new electric motors.

A 10,000-bushel elevator is being erected at Clark, Iowa, for Kuncce & Nelson. It is of ironclad construction.

A 10-ton Fairbanks-Morse Scale has been installed in the elevator of H. N. Edmondson at Gifford, Iowa.

The Felck Elevator Company of Kilduff, Iowa, has installed a 10-ton Fairbanks Morse Scale and truck dump.

The name of Behan & Vinton at Masonville, Iowa, has been changed to the Farmers Commission Company.

The Industry Elevator Company of Industry (p. o. Fort Dodge), Iowa, has installed a number of improvements.

A truck dump and 10-bushel scale have been installed and cupola of the elevator of C. E. Beall at Williams, Iowa, raised.

The stock and business of Frerichs & Roben, dealers in oils at Ackley, Iowa, have been sold to the Farmers Elevator Company.

The Dickens Farmers Elevator Company of Dickens, Iowa, has leased the Varney Elevator from the Exchange Savings Bank of Dickens.

The Nebraska-Iowa Grain Elevator at Malvern, Iowa, is under the management of Lee Ficke. Mr. Melichar, the former manager, has retired.

The elevator at Blencoe, Iowa, has been leased by W. J. Langan. He was formerly manager of the Nye & Jenks Grain Company's elevator at Creston, Neb.

The office of the Farmers Elevator Company of Albert City, Iowa, has been remodeled. A 16-ton truck scale was installed among other improvements.

The Newburg Co-operative Elevator Company of Newburg, Iowa, has been reorganized as the New-

burg Elevator Company. The new firm is a stock company with George Lane, Sr., president; Charles Newcomer, vice-president; R. M. Burroughs, secretary.

M. C. Larsen is now manager of the Fort Dodge, Iowa, office of the Rural Grain Company. He has been manager of the Farmers Trading Company at Des Moines, Iowa.

The grain business and elevator of the Fullerton Lumber Company of Latimer, Iowa, have been sold to the Quaker Oats Company. Henry Jensen will remain as manager.

The Farmer Elevator Company of Clare, Iowa, has renewed its articles of incorporation. Its capital stock is \$20,000. August Baumchen is president; W. W. Allen, secretary.

A number of improvements, including new scales, new electric motor and mill, have been installed for the Wheatland Grain Company of Wheatland, Iowa. Logan Nelson is manager.

The articles of incorporation of the Farmers Exchange of Palmgrove, Iowa, have been renewed. The firm is capitalized at \$20,000. The company will buy, sell and handle, grain, coal, lumber, etc.

The elevator of the D. Milligan Company of Grand Junction, Iowa, is being rebuilt with capacity of 50,000 bushels. It has two legs, two pits, a 10-ton truck scale, Fairbanks Morse Hopper Scale, two cleaners, truck dump and anti-friction bearings.

EASTERN

The new Buffalo, N. Y., elevator of the Hecker-Jones-Jewell Milling Company has been completed.

The Brown Milling Company, large grain, feed and coal firm of Randolph, N. Y., is making improvements in its coal handling facilities.

Two large concrete storage tanks for buckwheat with capacity of 20,000 bushels are to be built at Ballston Lake, N. Y., for J. H. Parkis. He also installed a complete mixing and packing machine for prepared flour.

The Port of Oswego Corporation of Oswego, N. Y., has been incorporated to deal in grain and cereals of all kinds. Walter B. Batchelor, Elston F. Wiltse, Richard L. D. Taylor, Harry A. Kee, William F. Upham are interested. Louis C. Rowe, 11 West Bridge St., Oswego, N. Y., filed the petition.

MISSOURI, KANSAS AND NEBRASKA

The Carl Johnson Elevator at Dwight, Kan., has been leased by O. M. Shaw.

Roller bearings are being installed on the corn sheller of Geo. F. Hall at Hoyt, Kan.

Extensive repairs have been made to the elevator of the Duff Grain Company at Johnson, Neb.

The new warehouse of the Blair Elevator Corporation of Atchison, Kan., has been completed.

The Farmers Co-operative Company of Unionville, Mo., will rebuild its elevator which burned.

The Farmers Co-operative Elevator Company of Conway, Kan., has installed a new motor and truck scale.

The interest of M. W. Bever in the elevator at Altair (p. o. Colby), Kan., has been sold to Harold Hills.

F. C. Machin has sold his interest in the Machin-Willig Grain Company of Hebron, Neb., to C. P. Willig.

The elevator of Oscar Vanier at Endicott, Neb., has been enlarged and car loader and manlift installed.

The Farmers Co-operative Elevator Company of Stratton, Neb., has installed a new 25,000-bushel elevator.

A new grain and hay warehouse is being erected at Kearney, Neb., for the Burgner Lumber & Coal Company.

The grain business and coal sheds of J. J. Mulaney at Randolph, Neb., have been bought by C. J. Ronan.

A head drive has been installed on the elevator of the Farmers Union Co-operative Company at Lynch, Neb.

An electric truck lift and new scale have been installed for the S. H. Manning Grain Company of Burruss, Neb.

Ralph A. Murdock is manager of the Farmers Grain Company of Arapahoe, Neb., succeeding the late W. S. Curry.

The Bird City Equity Mercantile Exchange's elevator at Bird City, Kan., has been equipped with lightning protection.

The Old Monroe Elevator Company, Old Monroe, Mo., has been incorporated by W. H. Dyer and Charles R. Clemmons.

Plans have been announced for the erection of a 2,000,000-bushel addition to the present headhouse of the St. Joseph (Mo.) Public Elevator. This will give the elevator total capacity of 2,250,000 bushels.

When the work is completed, the Trans-Mississippi Grain Company will take over and operate the house.

The Farmers Union Co-operative Business Association is erecting a new 12-bin 25,000-bushel elevator at Solomon, Kan.

D. A. Beckner is succeeded as manager of the Watson Grain Company's elevator at Winnebago, Neb., by W. G. Whitted.

The Brunswick Elevator Company has been incorporated at Brunswick, Mo. T. J. McNabb and John Meyers are interested.

A new warehouse is being built and corn sheller and grain cleaner installed for the Tarkio Mill & Elevator Company of Tarkio, Mo.

The elevator of the Wright-Leet Grain Company at Bellaire, Kan., has been repaired and equipped with a 10-ton Fairbanks Morse Scale.

A 10-ton Fairbanks Morse Scale has been installed and repairs made to the leg and truck lift installed for A. R. Olson of Maskell, Neb.

G. A. Sallee has bought the elevator at Wilcox, Mo., which has been standing idle for some time. It was owned by the R. M. Van Ness Construction Co.

The Centerview Elevator Company of Centerview, Kan., has improved its elevator including a new air dump and new transmission rope.

R. C. Moore has bought the 20,000-bushel elevator of the Collingwood Grain Company at Greensburg, Kan. He was manager of the elevator for three years.

The office of the Equity Union Grain Company at Kansas City, Mo., has been moved from Wymore to Marysville, Kan. Sam Hassell has been in charge of the office.

Chatterton & Son of Lansing, Mich., has opened a western transit warehouse at Kansas City, Mo. It will be used in handling beans from buying stations in Colorado, Idaho, California, Montana and Wyoming.

A 500,000-bushel addition is to be built to the Alton Elevator at Kansas City, Mo. Wolcott & Lincoln, Inc., are operating the elevator. With the additional capacity, the house will have total capacity of 700,000 bushels.

The contract has been let by the Grain Belt Elevator Company of Hutchinson, Kan., for the erection of bins holding 275,000 bushels. The company already has under construction head house which will hold 110,000 bushels and will have a capacity of 385,000 bushels when the tanks are completed.

The Kansas Co-operative Wheat Marketing Association of Wichita, Kan., is negotiating for the erection of a 1,000,000-bushel elevator. Ernest R. Downie is general manager of the pool. The association already operates two such elevators, one at Leavenworth and one at Kansas City, which was built by the C. & A. Railroad two years ago and leased to the pool.

ILLINOIS

Wm. Cowan is manager of the North Aurora Elevator Company of North Aurora, Ill.

Horton & Reeder of Garrett have bought the Bourbon Elevator at Tuscola, Ill., for \$20,000.

The Farmers Elevator Company of Iroquois, Ill., has installed a 10-ton Fairbanks Morse Scale.

L. W. Martin succeeds Wm. Dixon as manager of the Farmers Grain Company at Covell, Ill.

A new electric corn tester has been installed for the Wyoming Grain Company of Wyoming, Ill.

The Rogers Grain & Coal Company at Hume, Ill., is successor to the Mutual Grain Company.

Loading machines for handpicking coal have been installed at the Equity Elevator at Highland, Ill.

The grain and feed business of H. W. Kilik & Son of Bethel, Mo., has been moved to Quincy, Ill.

An elevator for unloading corn has been installed for the Glasford Grain & Milling Company of Glasford, Ill.

The Hasenwinkle-Scholer Grain Company of Heyworth, Ill., has erected a crib of 7,500 bushels capacity.

A new 1,000-gallon gasoline storage tank has been opened at Latham, Ill., for the Farmers Grain Company.

Electric motors for power are to be installed at Bonfield, Ill., for the Bonfield Grain & Lumber Company.

An auto truck dump is to be installed at Cullom, Ill., for the Cullom Co-operative Grain Company of Cullom.

The new 100,000-bushel elevator of the Decatur Grain & Elevator Company of Decatur, Ill., is now being operated.

The business of Morrison & Keffe at Toulon, Ill., has been sold to E. R. Weaver & Son of Princeville. The latter are conducting a feed and produce store.

The elevator and mill at Galva, Ill., formerly operated by G. G. Lamb have been reopened for

business under the management of Lewis Kroepel and H. C. Heitzman. The new firm will be known as the Service Milling Company.

H. M. Matteson has bought the elevators of Paul Kuhn & Co. at Snyder (West Union p. o.), and Walnut Grove, Ill.

A new 10-horsepower electric motor may be installed at Cornland, Ill., for the Cornland Farmers Grain Company.

S. Himen is now in charge of the property of the Hill Grain & Elevator Company at Everts (Ridott p. o.), Ill.

A new cleaner and 35-horsepower electric motor have been installed at Niantic, Ill., for the Bruce Frederick Grain Company.

The elevator at Mendota, Ill., has been sold by Eckers, Ray & Bader to the Federal Grain Elevators. C. J. Bader is manager.

A new corn crib has been built at Hartsburg, Ill., for the Hartsburg Grain, Coal & Lumber Company and equipped with cup elevators.

A new warehouse storing feeds and seeds will be erected at Cedar Point, Ill., for the Farmers Co-operative Grain & Supply Company.

The Springfield Grain Products Company has been incorporated at Springfield, Ill. H. W. Hodson, William L. Holbert and J. E. Armstrong are interested.

The elevator of the Wakefield Grain Company of Waterman, Ill., is being rebuilt. It is 22x40 feet, has nine bins, 7½-horsepower electric motor, manlift and dump.

The plant of the Pleasant Plains Farmers Elevator Company at Pleasant Plains, Ill., has been equipped with a 30-horsepower Fairbanks Morse electric motor and cleaner.

The Burlington Elevator Company of Peoria, Ill., has been reorganized. Grant M. Miles is president; Homer M. Dewey, vice-president; Jacob Wachenheimer, treasurer; G. H. Page, secretary.

The elevator of the late Henry McManus at Kinsman, Ill., has been sold to Arthur J. John R. and Vincent W. Dunn and Mark T. Welsh of Laugham, Ill. The firm will operate as Dunn Bros. & Welsh.

OHIO AND MICHIGAN

The Ashley Elevator Company of Ashley, Ohio, has installed new foundations under the scales.

The Berkey Lumber & Grain Company of Berkey, Ohio, has installed two new distributor heads.

The Ohio Grain Company of Mechanicsburg, Ohio, is installing a power feeder and other equipment.

The M. G. Holmes Bean Company of Durand, Mich., is under the management of C. Holmes of Oak Grove.

The elevator of the Isbell Brown Company of Durand, Mich., has been reconditioned. The elevator has been idle for some time.

The Ryon Grain Company has been incorporated at Lansing, Mich., capitalized at \$50,000. Robert Ryon, 214 N. Pine Street, is president.

Extensive repairs have been made to the Farmers Elevator at Holgate, Ohio. A new corn sheller and hammer mill have been installed.

The Farm Bureau has completed a new elevator and warehouse at Utica, Mich. Allen Geisler is vice-president, and L. Klein, president.

The elevator at Curtice, Ohio, has been equipped with a new Western Corn Sheller. It has shelling capacity of between 800 and 1,000 bushels per hour.

The mill and elevator of the Decatur Co-operative Association at Decatur, Mich., are to be operated by the recently organized Decatur Elevator Company.

The Cass Ben & Grain Company, Bay City, Mich., is installing a magnetic spout ahead of its attrition mill to remove tramp iron from the stock to be ground.

The Farmers Elevator Company, successor to the F. A. Balderson Company, at Eagle, Mich., has overhauled its elevator and installed a feed grinder and corn sheller.

The Grand Blanc (Mich.) Co-operative Association, has recently installed a new cleaner to be operated by a 10-horsepower fully enclosed, self ventilated electric motor.

The new elevator of the Ohio Seed Company at Gutman (Santa Fe r. f. d.), Ohio, has been completed and opened for operation. The old house was burned some time ago.

The Ann Arbor Implement Company has bought the property of the former Michigan Milling Company at Ann Arbor, Mich., from John Swisher & Co. The new owners may use the property for their grain and feed business.

The land now occupied by the W. B. Gramlich Elevator and coal yards at Kenton, Ohio, has been bought by the Big Four Railroad Company. Under the terms of the sale, Mr. Gramlich must move his elevator to make room for the continuance of the double tracking of the Big Four Railroad. Mr.

Gramlich plans to re-establish his elevator and coal business on the other side of the Big Four tracks.

Chas. Wolohan, Inc., Saginaw, Mich., has just placed an order for the installation of copper cable lightning rods on their various elevators and warehouses in the following towns: Birch Run, Free-land, Gera, Gladwin and Hemlock.

The Cushman Company, Dimondale, Mich., has replaced the gasoline engine in its plant with a 10-horsepower single phase, electric motor. All wiring is in conduit, and the motor which, of course, is of the brush type, is enclosed in a fire resistive enclosure built of rigid asbestos lumber and concrete.

Charles O. Burgess with headquarters at Stanton, Mich., has recently made a change in the power for driving the elevator at Sheridan, Mich. He has replaced the gasoline engine with a five-horsepower fully enclosed, self ventilated motor, and expects shortly to build an addition to the elevator and install a direct connected feed mill.

The Michigan Bean Company of Fenton, Mich., has recently installed a large number of smaller motors to replace some of its larger motors so as to provide more of an individual drive for each machine. These motors are all Fairbanks Morse Type HAC Fully Enclosed, Self Ventilated, Ball Bearing. Motor starters are all equipped with low voltage and overload time limit protection.

The Livingston Co-operative Company, Howell, Mich., has about completed the change over from steam power to electric. The load is split among several motors as follows: One 30-horsepower fully enclosed, ventilated motor, directly connected to an attrition mill, one 30-horsepower on the flour mill, one 15-horsepower on the cleaner, one 7½-horsepower on the crusher, one 5-horsepower on the sheller and one 3-horsepower operating feed mill elevator legs. All motors of the fully enclosed, self ventilated type. An ammeter has also been provided in the wiring system to the feed mill motor so that the operator of the mill can keep the feed mill loaded up to its proper capacity without the possibility of overloading the motor.

MINNESOTA AND WISCONSIN

A new elevator is being erected at South Spencer (Spencer p. o.), Wis.

A grain, hay and feed store is to be conducted at Platteville, Wis., by John A. Rollins.

The Hunting Elevator at Lake City, Minn., has been opened for business by John B. Cain.

Carl U. Somers has resigned as manager of the terminal elevator of the Equity Co-operative Exchange at St. Paul, Minn.

The proposed building program for the Washburn Crosby Company at Minneapolis includes a 200,000-bushel grain elevator.

Eighteen new coal bins have been completed for the Farmers Co-operative Grain & Stock Company of Le Roy, Minn. V. A. Morrow is manager.

A large feed elevator, fully equipped for grinding and handling feeds at Donnelly, Minn., has been built by L. F. Hodgson. J. M. Root is manager.

A foundation is being put in for 18 additional storage tanks for the Osborne-McMillan Elevator Company of Minneapolis, Minn. They will be completed by January 1.

Four new coal sheds have been built to the plant of the Independent Elevator Company of Mahanomen, Minn. J. A. Lindquist is operator. This makes 10 which the company operates.

The name of the Monticello Mill & Elevator Company of Monticello, Minn., has been changed to the Farm Supply Company, Inc. Its capital stock is \$50,000. R. R. Rand is president and M. L. Hallowell, secretary.

The Kasota Elevator at Kasota, Minn., has been bought by the Sheffield Elevator Company of Minneapolis. This elevator is a mixing house and has capacity of 150,000 bushels. The plant is being overhauled for immediate use.

Articles of incorporation have been filed for the Willmar Dairy & Trading Company, Inc., of Willmar, Minn., to deal in grain, feed, seed, etc. Martin C. Hansen, George J. Hansen and Joyce E. Hansen are interested. Capital stock is \$50,000.

The O. & N. Lumber Company of Curtiss, Wis., is building a new addition and the grain bins are being made over and the office enlarged. A 24-inch attrition mill, operated by two 20-horsepower motors, and a feed mixer have been installed.

CANADA

The Quebec Harbor Commission has completed its new 2,000,000-bushel addition at Quebec, Que.

A 35,000-bushel elevator is being erected at Peace River, Alta., for the Midland Northern Grain Company.

Over 100 new elevators have recently been completed on the Willingdon line in Alberta at a cost of \$3,000,000.

The 7,200,000-bushel elevator at Port Arthur, Ont., owned by the Canadian Wheat Pool has been opened for business.

A building permit for a grain warehouse costing \$2,000 has been taken out by the Coast Grain & Feed Company of Vancouver, B. C.

At St. John, B. C., the Harbor Commission created in 1927 has taken over the administration of all terminal facilities, including those which formerly were the property of the city of St. John, and by an act of 1928, the commissioners may issue loans up to a total of \$5,000,000 which are to be

expended on additional berthing facilities and the erection of a 2,000,000-bushel elevator.

C. R. M. Bryan is now in charge of the grain department of the Vancouver Milling & Grain Company, Ltd., of Vancouver, B. C.

The elevator of the N. M. Patterson Elevator Company, Ltd., at Fort William, Ont., has been equipped with an extra conveyor belt.

The new 2,000,000-bushel elevator at Toronto, Ont., being erected by the James Playfair Company will be ready for operation this month.

HAY, STRAW AND FEED

A feed store has been opened at Hazen, Ark., by Jack Bittle.

A full line of feeds is to be handled by Reynolds & Sons of Myrtle, Miss.

The G. & M. Grain Company has opened for business at Dyersburg, Tenn.

A feed store has been opened at New Lisbon, Wis., for Roy G. Stubbs.

A batch mixer has been installed in the plant of Hake & Son of Tipton, Kan.

The Dohner's Feed Store at Pierceton, Ind., has been bought by Emmet Schaaft.

A hay, feed and grain store has been opened by John A. Rollins at Platteville, Wis.

The Oehlert Feed Store opened for business November 1, at Belle Plaine, Iowa.

A new feed mixer has been bought by the Hoffman Feed Company of Madison, Wis.

A hammer mill is to be installed for the Mayer Grain Company of South Whitley, Ind.

A \$7,000 warehouse is being erected at San Benito, Texas, for the San Benito Feed Company.

The Oehlert Cash Feed Store has been opened for business at Belle Plaine, Iowa, by S. J. Oehlert.

A batch mixer has been installed for the Evansville Feed & Grain Company of Evansville, Wis.

New feed grinding equipment has been installed for the Farmers Elevator Company at Shelbyville, Mo.

A general feed store and commission house has been opened at Powell, Wyo., by Ed. Shoemaker of Greybull.

A wholesale and retail feed store has been opened at McKenzie, Tenn., for the Brown Feed Company of Paris.

An addition has been built to the elevator of Pelley & Rietz at Rowan, Iowa, to house a feed grinder.

A wholesale and retail grain, flour and feed business has been opened at Bay City, Texas, for W. H. Smith.

Arthur H. Peterson and E. R. Klinner are now associated at Stetsonville, Wis., as the Dairy Hay Company.

A new mixer is being installed in the feed room of the Winfield Elevator & Supply Company of Winfield, Iowa.

The interest of W. J. Fisher in the Nashua (Iowa) Feed Company has been bought by Jerome Walsh, his partner.

An Alfalfa grinding and mixing mill has been installed for the N. Brownfield & Son Feed Yards of Cozad, Neb.

A feed warehouse for cash and carry merchandising is being built at Mt. Pleasant, Pa., for W. S. Leeper & Sons.

The coal, lumber and feed business of A. N. Levan & Son at Kutztown, Pa., has been bought by Theodore W. Miller.

The Bell's Feed Store at Murfreesboro, Tenn., has been bought by the Farmers Feed Company. E. C. Fite is manager.

A new brick office and feed storage room have been built at the elevator of Wm. Ringle & Co., at Cambridge, Ill.

Frank Whitehead and Sam Dunlap have organized at Mt. Vernon, Wash., as the Valley Feed & Seed Company.

The Northwest Seed Growers Association has installed a new hammer mill for feed grinding at Fairmount, N. D.

A feed business has been started at Sioux City, Iowa, by Henry Connors. He has erected a large warehouse for it.

The Dairy Feed Company has been incorporated at Stockton, Calif., capitalized at \$25,000. The company will buy and sell hay, feed, grain and other

products. Frank S. Glass is president and general manager; C. W. Hightower, vice-president and sales manager; Margaret M. Sullivan, secretary.

A new corn cutter and other machinery has been installed in the mill of the Cortland Feed Company of Cortland, N. Y.

A hammer mill for grinding feeds has been installed for the Joyce Grain & Coal Company of Eagle Grove, Iowa.

A new addition has been built to house the feed grinding department of the Gray Grain & Fuel Company of Shirley, Ind.

A feed and coal house is to be opened at Eldorado, Texas, for G. B. Shoemaker & Son. They will operate wholesale and retail.

A feed mill has been installed in the elevator of the Osborne-McMillan Elevator Company of Minneapolis at Annandale, Minn.

The interest of C. J. Franklin in the City Feed Store at Van Buren, Ark., has been sold to J. M. Scott who is now sole owner.

The feed store of D. B. Horn at Corinth, Miss., has been bought by Farris & Hanley who will conduct it as the Corinth Feed Store.

A complete line of feeds is now handled as an additional sideline by the Lexington Mill & Elevator Company at Chappell, Neb.

A building at Corvallis, Mont., has been bought by John Hauf and George Newby who have remodeled it and installed a feed mill.

The plant of the C. L. Travelute Grain Company of Lebanon, Kan., has been equipped with a hammer mill and feed mixing machinery.

Feed grinding and poultry feed manufacturing machinery has been installed for the Farmers Elevator Company of West Mineral, Kan.

A new feed warehouse is being erected and improvements made to the plant of the Rudolph Mercantile Company, Frank Miller, owner, at Rudolph, Wis.

The Cutler Dickerson Company of Adrian, Mich., has placed its order for a copper cable lightning rod installation on its feed mill and detached warehouse.

H. Ruttle & Sons of Carsonville, Mich., are installing an attrition mill, direct connected to a 30-horsepower fully enclosed, self ventilated electric motor.

The office and display room of the Fernando Valley Feed & Fuel Company at Glendale, Calif., have been opened. H. K. Tackabury will be in charge.

The Maumee Feed & Fertilizer Company has been incorporated at Toledo, Ohio, capitalized at \$6,100. Bert Curson, H. Husband and George E. Dixon are interested.

The Replogle Mill Building at Shenandoah, Iowa, recently bought by Henry Field, has been leased for a period of one year by the Johnson Bros. Feed Company.

A feed store, known as the Del Mar Ave. Feed Store, has been opened at Wilmar, Calif., by Frank B. Fleming, formerly of the Wilmar Feed & Seed Company.

The feed store at Gallatin, Tenn., operated by J. R. Troutt & Co., has been bought by R. E. Cron and J. W. Hill. They will operate as the Cron & Hill Feed Company.

The poultry business of Mrs. Antha Sullivan at Mt. Sterling, Ky., has been bought by Riggs Sullivan, her son, who will now operate as the Sullivan Feed & Produce Company.

The Carson City Elevator Company of Butternut, Mich., has installed an attrition mill, powered with a fully enclosed, self ventilated 40-horsepower motor directly connected to the mill shaft.

Martin C., George J., and Joyce E. Hansen have incorporated at Willmar, Minn., as the Willmar Dairy & Trading Company, Inc., capitalized at \$50,

000. The company will manufacture, buy and sell dairy products, etc.

The Cass City Grain Company is installing a 10-ton feed mixer at Pinconning, Mich., to be operated by a 10-horsepower Fairbanks Morse, fully enclosed, self ventilated electric motor.

A warehouse has been completed at Emmett, Idaho, for the Farmers Feed & Seed Company. This gives additional floor space for the expansion of the milling plant and for storage facilities.

A feed business, selling all kinds of hay, grain and feeds, is to be conducted at Aiken, S. C., for Cuthbert L. McCarty and Flint S. Hendrix. They have leased the Shuler Warehouse there.

Charles Wolohan, Inc., are installing a modern feed mill at Gladwin, Mich., to be driven by a direct connected 60-horsepower fully enclosed, ventilated motor. This equipment is being installed in

the old McGeorge Elevator. This grinding unit is also equipped with a built in magnetic spout for the removal of tramp iron from stock to be ground. An ammeter to indicate the current load is also being installed in the motor circuit.

The old Chick Mill at Rockford, Ill., has been reconditioned by the Rockford Grain & Milling Company. The company now does a general grain and feed business including feed grinding.

The Mason Elevator Company of Mason, Mich., has installed a new attrition mill, driven direct by two 25-horsepower electric motors. All of the electric wiring is being overhauled and being entirely enclosed in conduit, and all motors are being provided with overload relay protection instead of fuse protection. An ammeter is also being provided for the attrition mill motor circuit so that the operator can tell just what load the machine is operating at any time.

OBITUARY

BALLARD.—E. O. Ballard died aged 77 years. He was a pioneer grain and feed man of Minneapolis, Minn. He first entered the commission and feed business in 1898.

CLEMONS.—U. F. Clemons died on October 31 at Marshall, Okla. He was active in the grain business and was president of the Oklahoma Grain Dealers Association a number of years ago.

CRAMER.—Delbert Cramer died at Van Horne, Iowa, from pneumonia. He was manager of the Farmers Elevator at Livermore for a number of years.

DEAN.—B. A. Dean died from heart trouble on October 20 at his hay, grain and coal store at Auburn, N. Y. He was president of the Dean-Dillingham Company and a member of B. A. Dean & Son, dealers in hay, grain and coal at Auburn.

DOYLE.—J. M. Doyle died at Mitchell, S. D. He was a grain buyer at Yankton, S. D.

DOYLE.—Tom Doyle died aged 80 years at Milwaukee, Wis. He was at one time a wealthy grain dealer there.

FEARER.—Marshall J. Fearer died on October 11 while visiting the home of his son in Duluth, Minn. He was at one time connected with the grain business of Duluth but lately had been a resident of Uniontown, Pa.

FAIRBANKS.—Richmond J. Fairbanks died on September 30 on train enroute to Buffalo. He was a veteran feed dealer of Hermon, N. Y. His widow two sons and two daughters survive him.

FOLSOM.—Stephan B. Folsom was killed when several bags of seed fell on top of him in his store at Markesan, Wis. He was a retail feed and seed dealer there. Apparently he had tried to pull out a defective sack from the tier and displaced the others in doing so.

GATES.—Leslie F. Gates died on October 19 from coronary thrombosis at Battle Creek, Mich. He was formerly president of the Chicago Board of Trade.

GENTZ.—Herbert W. Gentz died aged 33 years from heart trouble at New England, N. D. He was manager of the Farmers Elevator Company.

GRAVES.—Col. C. H. Graves died at Santa Barbara, Calif. He was formerly of Duluth. He was the last of the incorporators of the Duluth Board of Trade.

GRUNHOVD.—Helmer Grunhovd died from a ruptured appendix, aged 33 years on September 28, at a Mason City, Iowa, hospital. He was manager for a number of years of the Independent Elevator at Scarville, but for the last few years had been forming near Lake Mills.

HARDIN.—Fred V. Hardin died at Fortville, Ind. He was manager of the Hardin Grain Company.

HURLBURT.—Frank E. Hurlburt died on November 1, aged 66 years. He was elevator superintendent for the Pierce grain interests at Buffalo, N. Y., for a number of years.

JAMISON.—Martin F. Jamison died aged 92 years on October 25. He was for years in the grain and feed business at Indiana, Pa.

JONES.—John H. Jones, director of the Chicago Board of Trade, died at his home in Chicago on November 7.

KIRKPATRICK.—Erroll Kirkpatrick was killed in an automobile accident. He was grain buyer for the Beyer Grain Company of Wichita, Kan.

MILLER.—John M. Miller died after three months' illness. He was one of the oldest grain and mill men in Kokomo, Ind.

MASSEY.—R. Massey died recently at Norman,

Okla. He was a pioneer grain man of this city. His widow, two daughters and five sons survive him.

M'CLUSKY.—Clarence W. McClusky died on October 7 from injuries received in an automobile accident. He was secretary of the Mann Bros. Linsed Company, Buffalo, N. Y.

MINER.—Frank J. Miner died suddenly on October 16 in St. Louis, Mo. He was a former member of the Chicago Board of Trade. He retired as a trader for the Armour company 12 years ago and went to St. Louis where he had lived since.

FIRES—CASUALTIES

Ashton, Ill.—Fire damaged the O. C. Baker Elevator.

Burkeville, Texas.—Fire destroyed the Kerr Feed Store.

Hancock, N. Y.—Fire damaged the feed store of W. A. Hall with a \$10,000 loss.

Loda, Ill.—Fire damaged slightly the elevator of the Loda Farmers Grain Company on October 5.

Bruno, Sask.—Fire destroyed the Saskatchewan Pool Elevator together with 14,000 bushels wheat.

Cranmer Siding, Man.—The United Grain Growers Elevator collapsed with 30,000 bushels of grain.

Toston, Mont.—Fire on September 6 damaged slightly the elevator of the State Elevator Company.

Athol, S. D.—Fire damaged slightly on October 19 the elevator of the Farmers Co-operative Elevator Company.

Lancaster, Pa.—Fire on October 29 destroyed the property of the American Seed Company with a loss of \$35,000.

Lyons, N. Y.—The plant of Vanderveer & Coleman was slightly damaged by fire of undetermined cause on October 16.

Hunters Creek, near Lapeer, Mich.—The grain elevator, owned by the Andrews Bros. of Detroit, burned on October 31.

Hamilton, Mont.—The warehouse of the Sloans Seed Company was destroyed with loss of \$12,500; some insurance was carried.

Haines, Ore.—Fire destroyed the W. D. Hearing Grain Warehouse with a \$35,000 loss. The warehouse was empty at the time.

Cullom, Ill.—The buildings, including office and storehouse, of the Co-operative Grain Company were destroyed by fire on October 12.

Calgary, Alta.—The Midland & Pacific Grain Corporation's elevator here burned on October 20 with a loss of \$60,000. It was insured.

Latimer, Kan.—The elevator of the Robinson-Wyatt Grain Company was destroyed by fire of undetermined origin on November 5.

McPherson, Kan.—The elevator of the C. E. Robinson Elevator Company was slightly damaged by fire of unknown origin on October 21.

Coles Station, near Mattoon, Ill.—Fire destroyed the grain elevator owned by Ed Morris. The loss was between \$20,000 and \$25,000. In the elevator at the time of the fire were two carloads of corn,

PEARSON.—Hartley M. Pearson died at Edmonton, Ont. He was general superintendent of the elevators of the Alberta Wheat Pool. Before joining the wheat pool, he was for 20 years with the John R. McFarland Grain Company of Calgary, Alta.

ROSLER.—Hans G. Rosler died on October 30 when he fell from a short ladder while loading grain into a car and broke his neck. He was manager of the elevator of the International Elevator Company at Arnegard, N. D.

RYAN.—Thomas Ryan died on October 6 at Holabird, S. D., from heart trouble. He was for years in the grain and stock business at Holabird.

RYER.—W. A. Ryer, manager of the Spokane, Wash., branch of the Ryer Grain Company, died from intestinal trouble.

SANFORD.—John H. Sanford died at Omaha, Neb. He was a former well known grain man of Sioux City. Until about three months ago he conducted the Sioux City Grain Traders Exchange at Sioux City.

SHERMAN.—William Laird Sherman died at Milwaukee, Wis. He had established the Milwaukee Brokerage Company in 1889.

SLUDGE.—James Sledge, grain dealer, died at Excelsior Springs, Mo., from paralysis. He was in the grain business at Champaign, Ill., for years.

SPRAGUE.—George A. Sprague died on October 12 at Rochester, N. Y., from heart trouble. He was in the feed business at Albion, N. Y.

STEVENS.—Thomas Mortimer Stevens died recently at Vancouver, B. C. He was president of the Imperial Milling & Grain Company, wheat exporters and rice importers.

STRATTON.—E. C. Stratton died from apoplexy. He was founder of the Troy Grain & Supply Company of Troy, Ohio.

WIEDEMANN.—Charles S. Wiedemann, president of the George Wiedemann Grain Company, Newport, Ky., died on November 3.

one on the ear and one shelled. The elevator will be rebuilt.

Archer City, Texas.—Fire destroyed the warehouse of the Graham Mill & Elevator Company on October 22. The cause was unknown.

Beverly, Sask.—Spontaneous combustion caused a fire which destroyed the elevator of the Spencer Grain Company on November 3 with a \$60,000 loss.

Indianapolis, Ind.—The Indianapolis Public Elevator was destroyed on November 3. It was owned by the Nashville Warehouse & Elevator Corporation.

Lewistown, Mont.—Fire damaged the cupola on the elevator of the Farmers Elevator Company on October 12. A spark from a switch engine caused the fire.

Archer City, Texas.—Fire damaged the warehouse of the Graham Mill & Elevator Company at this place on October 22. The cause of the fire is unknown.

Kuroki (West Hope p. o.), N. D.—The elevator owned by the Kuroki Elevator Company, filled with grain, burned. The loss was fully covered by insurance.

Van Wert, Ohio.—Fire reported as being caused by the motor burning out on the sheller slightly damaged the plant of the Van Wert Equity Exchange Company on October 23.

Avondale, Colo.—Fire destroyed the plant of the Avondale Alfalfa Milling & Elevator Company with a \$30,000 loss. The plant was owned by the Thatcher Milling & Elevator Company.

Hillsdale, Okla.—The frame, ironclad, metal roofed elevator of the Oklahoma Wheat Growers Association was burned on September 28. The damage, which was slight, was covered by insurance.

Denton, Kan.—The property of the Doniphan County Farmers Union Co-operative Association of Leona, Kan., consisting of a frame, ironclad elevator, burned on October 12. The loss was partly covered by insurance.

Cayley, Alta.—Fire destroyed the elevator of the Alberta Pacific Grain Company and 70,000 bushels grain on October 27. The building was valued at \$25,000 and the grain at \$75,000. The loss was covered by insurance.

Mason City, Ill.—Fire destroyed the office and one warehouse of the G. D. Sutton Seed Corn Company, on October 24. The cause of the fire is unknown.

The building was erected about 20 years ago and had a capacity of 50,000 bushels. It was not nearly filled.

Fairfield, Ill.—The frame, composition roof, seed cleaning building of the A. J. Poorman Company was totally destroyed on September 29. One of the detached warehouses was also badly damaged.

Strasburg, N. D.—Fire destroyed one of the elevators of the Liberty Grain Company here. It was one of four elevators owned by the company at this location, but had not been in operation this year.

WHAT IS THE CHEAPEST METAL TO BUY?

"What is the best kind of metal to put on my elevator?" That is a question we get fired at us every so often and we have sought widely for an answer. To get an unbiased opinion is exceedingly difficult because it seems that everyone in a position to give out an authoritative statement is connected with one or more of the sheet metal manufacturers.

As a matter of fact, it doesn't matter so much just what particular kind or brand of metal you use—the important thing is to buy the best of that particular kind or brand. Now, as far as any one kind is concerned, for elevator purposes at least, the best is usually the heaviest gauge. You are buying it for its weatherproofing qualities; what you are buying is years of service and not just so many squares of metal. Figure it on that basis and you readily see that the best is not only the heaviest but the cheapest as well.

The labor cost of applying iron is the same for all weights. The labor cost of making the iron is about the same for all weights, so that the real difference in cost as between two gauges is in the material itself and, as with most fabricated materials, the material cost is comparatively a small percentage of the total. Therefore, of two sheets one weighing twice the other, the second will cost more than the first but not twice as much.

As a matter of fact, the cost to the buyer per pound of material put into service is less for 26 and 28 gauge than for 29 gauge. Suppose you need 10 squares of roofing (1,000 square feet). That quantity of galvanized corrugated steel would weigh in 26 gauge, 980 pounds; in 28 gauge, 840 pounds; in 29 gauge, 770 pounds.

Assume the 10 squares of 26 gauge laid down at your station would cost you \$6.88 per square or \$68.80 total. On the same basis the 28 gauge would cost \$6.14 per square or \$61.40 total. And the 29 gauge \$5.88 per square or \$58.80 total.

Therefore you save—as between 26 gauge and 28 gauge—\$7.40 on the job, and as between 28 gauge and 29 gauge \$2.60. That is, you have simply saved that much on material to cover your roof—but in years of weatherproofing have you saved anything?

Wear depends upon the weight of material. Taking the above total costs and dividing by the weights we find that the 26 gauge costs .061 per pound, the 28 gauge .073 per pound, and the 29 gauge .076 per pound. Therefore it is easy to see that when you figure on what you get—the value instead of the price—the heavier gauges are the best and cheapest.

The United States Department of Commerce recommends 28 gauge and heavier for roofing purposes.—Our Paper, Grain Dealers Mutual Insurance Company.

THE GRAIN WORLD

AT a meeting of the Seed Advisory Board at Ottawa recently it was decided to continue the restrictions against Alfalfa seed imported from the United States, the Department of Commerce is informed in a report from Assistant Trade Commissioner A. H. Thiemann. All such seed must be stained 10 per cent red with the exception of high-quality Grimm, Variagated and Baltic, which may be stained 1 per cent blue and must be certified true to name by a Government inspector in the State grown and inspected and sealed by him.

THE first official estimate of the 1928 corn crop in Yugoslavia is 81,216,000 bushels, according to the International Institute of Agriculture at Rome. This is the smallest crop there since 1921.

THE S. S. *Emanuele Accame*, an Italian steamer, left Montreal on October 18 with a cargo of 565,000 bushels of grain, the largest single shipment on record, states a report from Trade Commissioner Walter J. Donnelly. It consisted of 12 different types and grades of grain, with American oats predominating.

AN official report of the Spanish Department of Agriculture estimates the corn production in 1928 at 6,064,750 metric quintals (23,877,000 bushels).

ACCORDING to the Canadian Board of Grain Commissioners, the moisture content of all grains is low this season. Very little wheat is grading tough and damp.

BY a recent ministerial decree the Austrian government has restricted until June 15, 1929, the ex-

portation of the following cattle fodder commodities: Oats, corn, pod vegetables, hay and straw in all forms, states a report from H. L. Grove, commercial attache at Vienna.

EXPORTS of wheat and flour from the United States from July 1 to October 20 were 62,341,000 bushels against 105,869,000 bushels for the same period last year.

THE shipment of wheat from the principal grain growing regions has been heavy so far this year, a recent three-month total being 247,000,000 bushels compared with 222,000,000 bushels for the corresponding periods last year. The heavy movement has been from the western grain division of Canada, and Canadian exports through September show that most of this movement has been going out as exports. Argentina is also exporting a little more wheat this year than last, but the United States is lagging behind last year as are also Australia, India and the Balkans.

THE 1928 wheat production in 35 countries reported to date is 3,263,517,000 bushels against 3,054,241,000 bushels in those countries in 1927, when they represented 86 per cent of the estimated world total production outside of Russia and China.

UNOFFICIAL reports published by the Russian press now estimate a total cereal crop of 82,000,000 short tons, according to Agricultural Commissioner

L. V. Steere at Berlin. The 1928 grain crop was officially estimated at 83,500,000 short tons against 82,800,000 short tons in 1927.

THE 1928-29 wheat acreage in Australia is estimated at roughly about 14,000,000 acres against 11,823,000 acres in 1927-28.

THE second official estimate of the area sown to wheat in Argentina is 20,900,000 acres, an increase of 143,000 acres over the first estimate and an increase of 1,186,000 acres over the 1927-28 acreage.

THE Agricultural Department of Alberta, Canada, reports that the 1928 wheat crop is showing a very marked decrease in yield and a reduction in grade as compared with the estimates made some weeks earlier. Official reports to the Department by threshermen in all parts of the province show that the wheat crop will average approximately 20 bushels to the acre, and they emphasize the fact that injury to both the yield and quality of the crop from frost is more serious than was apparent from earlier reports. From a wheat acreage of 6,707,526 acres, as shown by the Dominion Government estimate, and on the basis of the average yield shown in threshers' returns, Alberta's wheat crop will amount to about 134,000,000 bushels. The September estimate of the Dominion Bureau of Statistics placed the crop of that province at 170,000,000 bushels.

FIELD SEEDS

(Continued from Page 318)

many growers realize that yields would be so low. Comments of a few of these growers follow: "I had the threshing machine work about one hour and got only about 25 pounds, so stopped work." "I threshed only 20 acres of the 42 as the expense of threshing was amounting to more than the returns for the seed." "Started threshing and found it would not pay the threshing bill so I did not thresh."

Because of the very unfavorable conditions that could not be foreseen early in September, production of Sweet Clover seed is now indicated in reports from growers to be only about one-third of the 1927 crop in northeastern North Dakota, and little more than one-half in southeastern North Dakota and northwestern Minnesota, and about two-thirds of the 1927 crop in northeastern South Dakota. In southeastern South Dakota, however, the crop was indicated to be much larger than last year because the increased acreage more than offset the smaller yields. Production in northwestern Iowa was reported to be about 30 per cent of last year. Kansas production, especially in the southeastern part, was also smaller than last year. In northern Illinois and northeastern Nebraska the crop was nearly as large as last year, and in western Nebraska, larger.

UNUSUAL CROP OF REGISTERED SEED IN MONTANA

By the first of November, 300,000 of the 600,000 pounds of registered Alfalfa seed raised in Montana had started to move to the various seed houses which had bought the seed. This seed this year has moved earlier than in the history of certification work. The 100,000 pounds of registered seed left over from the 1927 crop has also been sold. The quality is exceptionally good.

MILLET SEED CROP SMALLER

Production of millet seed in the United States is expected to be 10 per cent to 15 per cent smaller than last year, according to the United States Bureau of Agricultural Economics. The smaller production is due mainly to lower yields per acre as dry weather during the growing period prevailed in some of the principal producing districts including the Dakotas and Colorado. Acreage fell off only slightly although a greater proportion of the crop was used for hay; furthermore prices of the 1927 crop had not encouraged growers to extend their acreage for seed in certain districts.

In general, conditions for sowing the crop were favorable but quality is not expected to equal that of a year ago. The majority of growers reporting expected fair to good quality. Growers reporting the quality as poor outnumbered those reporting it very good.

Harvesting began from one to two weeks earlier than last year in western Nebraska, Kansas and northeastern Iowa. Harvesting began at about the same time or from a few days to a week later in northeastern Texas, western Oklahoma and northeastern South Dakota; and from a week to 10 days later in western Texas, southeastern North Dakota and southeastern Nebraska.

Although not fully established in all districts,

prices to growers on October 9 were about the same as last year. In the principal producing districts, they ranged for Germany mostly \$1.25 to \$2.50 per 100 pounds, basis clean; for Early Fortune and broomcorn millets 75 cents to \$1.25; for Japanese \$2 to \$3.50; and for Siberian 80 cents to \$1.

Carryover is believed to be larger than the unusually small carryover a year ago because spring sales were only about the same as the season before whereas the supply available from the 1927 crop available for sale last spring was much larger than that from the 1926 crop for sale during the preceding spring.

NEW SEED TRADEMARKS

The following new seed trademarks were recently published in the *Official Gazette* of the United States Patent Office: "Sylvan" lawn grass and field

DELTA 18



SYLVAN

seeds. Whitney-Eckstein Seed Company, Buffalo, N. Y. Filed August 6, 1928. Serial No. 270,659. "Delta 18" Alfalfa seed. Rudy-Patrick Seed Company, Kansas City, Mo. Filed August 9, 1928. Serial No. 270,803.

SEED VELVET BEAN CROP ABOUT SAME AS LAST YEAR

Production of velvet beans for seed may equal the large crop of last year, according to the United States Bureau of Agricultural Economics. Production has been increasing for the past three years.

Increases in acreage, especially in Alabama and western South Carolina were offset in part by decreases in southern Georgia and especially in southeastern South Carolina where excessive rains and storms are reported to have hindered the crop by beating down the vines thus making harvesting impossible in some instances.

Yield per acre is expected to be smaller than last year in the main producing districts with the exception of southern Alabama, where it is expected

larger. The condition of the crop in the United States on October 1 was 76.2 per cent of normal, compared with 75.7 last year and 73.8 two years ago.

The crop was somewhat later than usual so that harvesting began a few days later than last year, mostly between October 20 and November 1. In some important districts harvesting is not expected to be general until after the first killing frost; in others, not until other field work is out of the way and the beans become more mature.

Prices to growers, although not fully established on October 23, ranged mostly \$15 to \$23 per ton for beans in the pod and averaged \$17.50 compared with \$17 last year and \$20 two years ago.

NEW SEED RULES IN CANADA

Amendments have been made to the regulations covering the handling of seeds under the Seed Act in Canada. The amendments were made following a conference of the Advisory Seed Board.

Under the new regulations, No. 1 Alsike, White Clover, Domestic Red Clover, Alfalfa, and brome

grass seeds must now be free from primary noxious weeds. Bladder compion, white cockle and couch grass are now considered primary noxious and are included in that class. It has been suggested that the board institute an inspection of Alsike fields. Inspection of this kind is being done in Alberta with Grimm Alfalfa for registered seed, with variegated Alfalfa in Ontario, Red Clover in Ontario and Quebec, brome grass in Manitoba to certify it free from couch grass, brown top in Prince Edward Island to certify it free from Red Top and Garnet, and Reward Wheat in the prairie provinces to certify them true to variety.

Old standard grades in registered seed of wheat, oats, barley, rye, corn, flax, field peas and soy beans which were registered and extra No. 1 have been changed to No. 1, 2 and 3. These three grades must show 99.9 per cent purity and be absolutely free from primary noxious weeds. The reason for adopting a third grade was to provide a place for off-colored weathered seed, which except for this weathering is equal in purity and variety to the other grades.

Under the new amendments, commercial standards for cereals show only one change, the raising of the standard of Grade 3 for maximum primary and or secondary weed seeds per pound from 20 to 15.

Darnel has been put into the secondary noxious weed group. Previously it was included in the "other weed" group.

LESPEDEZA SEED PRODUCTION SLIGHTLY SMALLER

The commercial supply of lespedeza seed is expected to be slightly smaller than last year, according to the United States Bureau of Agricultural Economics. Yield per acre was expected to average higher than last year but a somewhat smaller acreage was expected to be harvested for seed since a larger percentage of the crop than last year was reported to have been used for hay and feed.

The crop in western Tennessee and northern Mississippi is indicated by scattered reports to be smaller than last year on account of much smaller acreage although yield per acre is expected to average somewhat higher. In southwestern Mississippi yields likewise are expected slightly larger but the falling off in acreage is not so great. Conditions were generally favorable for saving the crop in that section. In northern Alabama the crop is expected somewhat larger than the small one harvested in that section last year. Scattered reports from southern Louisiana indicate a somewhat smaller production on account of a reduction in acreage.

Harvesting began on about the same date as a year ago in Mississippi, but was three or four days later in northern Alabama and southern Louisiana. In some localities in Tennessee growers expected to wait for killing frosts before starting to harvest.

Prices were not fully established on October 30 but ranged mostly \$10 to \$13 per 100 pounds for clean seed. Opening prices last year ranged \$6 to \$8 in Tennessee.

Carry-over is indicated by country shippers to be smaller than last year.

PLAN UNDERTAKEN FOR IMPROVING MANITOBA SEED

Plans and programs for improving the strains of seed wheat in the province of Manitoba, Canada, were considered and adopted on November 2 by

representatives of the following groups: Farmer, Government, banking, pool, boards of trade, grain exchange, agricultural press and seed houses.

The recommendation for zoning the province as to suitable varieties was adopted and the work will be undertaken by the Manitoba Seed Board.

It was also decided that a campaign among organizations interested be instituted to raise a fund for the purposes of carrying out the necessary work to arouse the province to the necessity of better seed. This committee consists of J. B. Smith of the Canadian Bank of Commerce; Fred Pugh of the T. Eaton Company; C. H. Burnell, president of the Manitoba Pool; and J. H. Evans, deputy minister of agriculture.

The body approved of the plan for the development of a district representative system for the province. A carefully worked out program of seed improvement was also considered and adopted. This included various lines of work which agricultural societies, United Farmers, railway companies, United Grain Growers Wheat Pool, grain exchange, livestock bred associations, district builders, schools, municipal councils, experimental farms, Dominion seed branch, the agricultural college, Department of Agriculture, extension service, land settlement board, banks, manufacturers of cleaning machinery, loan companies, Canadian colonization association, Canadian seed growers association and seed houses will be asked to either undertake as new work or to continue and expand where they have already been doing work along the suggested lines.

SWEET CLOVER SEED MOVING FASTER THAN LAST YEAR

Movements of Sweet Clover seed from the hands of growers was fairly active during the four weeks ending October 30. Growers sold more freely than during September and total movement was ahead of last year. The United States Bureau of Agricultural Economics estimates that 55 per cent to 60 per cent of the crop had been sold by growers up to that date compared with 25 per cent to 30 per cent on October 2, 45 per cent to 50 per cent last year, 70 per cent two years ago and 40 per cent to 45 per cent three years ago.

In the main producing sections of Minnesota and the Dakotas, about 60 per cent to 65 per cent had moved, compared with 35 per cent on October 2 and 25 per cent a year ago. From October 2 to October 30, the heaviest movements occurred in northeastern South Dakota and northwestern Minnesota.

Prices paid to growers made an average advance of about 10 cents per 100 pounds during the four weeks, which was the same advance as during the preceding three weeks. On October 30, prices in 15 districts or states overage \$5.10 per 100 pounds, basis clean seed, compared with \$5 on October 2 and \$5.15 a year ago.

Later reports confirm earlier ones on quality. Fair to good quality was reported by the majority of shippers.

Imports of White Sweet Clover have been unusually small and for the period July 1 to October 31 amounted to only 11,400 pounds in contrast with 521,300 pounds last year and 757,900 two years ago. No biennial yellow was imported during the period this year while last year, 38,200 pounds and two years ago, 24,400 pounds were imported.

The Cliff's Seed and Poultry Store at Biloxi, Miss., has been opened by C. A. Mugnier.

A new and larger plant is now occupied at San Francisco, Calif., by the Sevin-Vincent Seed Company.

A branch store has been opened at Terre Haute, Ind., by the J. A. McCarty Seed Company which has operated in Evansville for the past six years. It



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Quality Seeds
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"M" BRAND Quality Seeds are all supervised and standardized by modern laboratory methods and thoroughly re-cleaned in our own plant—selected for purity, germination and of known origin. They are adapted to your conditions, tested and tagged to comply with your state seed laws.

MANGELSDORF
MERIT
FIELD SEED

Alfalfa	Clovers
Redtop	Timothy
Blue Grass	Grasses
Cowpeas	Soybeans
Sunflower	Seed Corn

Other Field and Grass Seeds

The advantageous location of our large and modern equipped plant with exceptional facilities for both shipping and receiving, enables us to quote best prices.

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Wholesale Field and Grass
Seeds
ST. LOUIS, MISSOURI

SEEDS BETTER SEEDS; BETTER CROPS
PRUNTY SEED & GRAIN CO.
9 South Main St. SAINT LOUIS

CHAPMAN'S Red Top

MEAT SCRAPS - - 50% PROTEIN

Digester Tankage - - 60% Protein—Great Specialty

SIDELINES FOR ELEVATORS

Special Odorless Bone Meal—Salt

RAW BONE MEAL — CALCIUM CARBONATE

Write or Wire

RIVERDALE PRODUCTS CO.

Offices: 105 West Adams Street, Chicago



60% Protein

is under the management of Frank Pritchard, formerly of Princeton, Ind.

The offices of the W. A. Denison Seed Company have been moved from Ellisburg to Adams Center, N. Y.

The David Hardie Seed Company of Dallas, Texas, has remodeled its building at a cost of \$8,000.

A branch warehouse with complete line of seeds has been established at Brooklyn, N. Y., by Masza Carrillo & Co.

The Farmers Co-operative Seed Company of Cambridge, Ill., has installed machinery for handling seed corn.

J. J. McClure is now agent in Idaho for the Occidental Seed Company of Salt Lake City, Utah. He is located at Twin Falls, Idaho.

The Hogue & Kellogg Seed Company of Salinas, Calif., has equipped a new mill building with the latest type of seed cleaning machinery.

The seed business of the J. J. Buffington & Co., Baltimore, Md., has been discontinued and the warehouse will be taken over by the J. Bolgiano Seed Company.

The O. & M. Seed Company of Green Springs, Ohio, has installed several new pieces of cleaning machinery in the new addition to be used for seed cleaning and storage.

The property of the A. Christianson Seed Company, Mt. Vernon, Wash., has been bought by the Skagit Farm Bureau for \$20,000. The bureau takes possession November 1.

The Gary Seed Store has been incorporated at Gary, Ind., and is producing, buying and selling all kinds of seeds, capitalized at \$25,000. M. Mack, W. F. Lasanke and Julia Wrosko are interested.

GRAIN DEALERS SUIT COAL TYPE TO LOCAL NEEDS

Types of coal handled as sidelines by elevator operators in the United States vary widely, as nearly every locality develops its own special demand for certain grades and kinds of fuel. There are about three different kinds of coal in the market; they are known as, anthracite or hard coal, bituminous or soft coal, and lignite or brown coal.

There are all grades of coal between these types; some may be semi-anthracite or semi-bituminous; and a tilted vein may be anthracite in its deepest part and bituminous near the surface. The type or kind, of coal depends upon the heat and pressure to which it has been subjected since its formation. So too there are all grades of coal between bituminous and lignite; the former is geologically older than the latter. Peat is of still later formation, and is intermediate in character between wood and coal.

Coke is bituminous coal from which the volatile

matter has been distilled, either in open ovens where the volatile matter is allowed to escape, or in closed retorts for the manufacture of gas or other by-products.

EFFECTS OF HEATING IMMATURE WHEAT

By C. O. SWANSON

Studies on the effect of heat on wheat were conducted in a small way at the Kansas Agricultural Experiment Station about 20 years ago. The experiments were few and of a very preliminary nature. More extensive experiments were conducted in 1911. The work then was done on fully matured but newly threshed wheat. The purpose was to find if the application of heat and moisture would bring about rapidly those beneficial changes which take place when new wheat is stored under favorable conditions. Small lots of wheat were heated in a specially constructed container. The main feature of this was that 12 pounds of wheat could be heated quickly, evenly and at the exact temperature desired. Wheat was heated at 113° F., 158° F. and 208° F. for various lengths of time; longer periods being used for the lower temperatures than for the higher. Before heating, measured amounts of water were added to these samples of wheat. Thus the effect of heat in connection with added water was studied, the idea being to ascertain the effect of heat in connection with tempering. After treatment the samples were cooled quickly and then milled and the flour baked.

Injurious Heating

When heat is purposely used by the miller on his wheat, the degree of heat and the length of the heating period are under his control. Wheat has sometimes been subjected to heating conditions before it reaches the miller. This may take place in the wheat stack or in the bin. Such wheat is known as stack burnt, bin burnt, or skin burnt. The outward sign of such heating is a darkened bran coat, a red to very dark red color, and a brittle bran. Such heating takes place in the stack if the wheat is not sufficiently dry when stacked. It may take place in the bin when wheat is threshed from the shock or harvested with the combine. Heating will take place if there is too high a moisture content in the wheat. This may be due to cutting before the wheat is mature, or from wet weather. The former is the more harmful. The prevailing temperature is also important as there is more danger of heating in hot weather than in cool weather.

The formation of the wheat kernel represents an intense biological activity. Within the space of a few weeks the kernel grows from a mere speck to the fully formed wheat grain. When the grain emerges into full form it is soft, and the inside is filled with a thick milky fluid. This gradually hardens and becomes the endosperm in the ripe kernel. During the process of kernel formation, materials are transferred from the leaves and stem and used to build the starch and protein of the kernel. This process goes on to the very last few days, but at a decreasing rate. The final process is apparently mostly one of desiccation, but not altogether.

Before desiccation has taken place, gluten cannot be obtained from the endosperm, but after this process protein is present in such a form that when water is added, gluten will form in flour. This means that there is a very intense biological activity at the milk stage and before. After this stage, the activity gradually decreases until the kernel is ripe, dry and hard when it is dormant or in a state of minimum activity. Therefore, wheat cut a little on the green side heats very easily and when this process is started it goes on at an accelerated rate.

Wheat undergoes what may be called a post ripening process. Flour milled from new wheat is not the same quality as when milled after that same wheat has aged for some weeks or months. When wheat is cut with the harvester, shocked and stacked, part of this process takes place before threshing. What is commonly known as a sweating process takes place in the stack or sometimes in the bin from shock threshed wheat. Sweating is simply another name for a very active respiration. This process produces heat and water. If the atmosphere

(Continued on next page)

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Miscellaneous Notices

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is sufficiently humid there will be enough moisture to be easily observed and for this reason the process became known as sweating.

The wheat kernel is a living organism. One of the universal signs of life is the production of carbon dioxide, the wheat seeds produce this gas. A seed is a plant under dormant conditions. The vital activities go on at the minimum rate. The addition of water or increase of temperature stimulates this activity. More activity means greater rate of heat production. Hence, when enough moisture is added to wheat the temperature will be increased, and this in turn will stimulate more activity and in turn more temperature. Hence, when wheat starts heating, the rate will soon increase to such an extent as to cause severe damage.

The coming of the combine has brought a very serious problem in wheat storage. It is probable that at the present time about half the Hard Winter wheat is harvested with the combine, and the number of such machines in use is increasing not only in the wheat belt proper, but they are used further and further east. The combine has come to stay. It is the most economical method of harvesting wheat and it has freed the farmer from a most difficult annual labor situation. With the combine from 300 to 600 bushels per day per man may be gathered.

When harvesters are used wheat may safely be cut before fully ripe. There may be a small decrease in yield, but the final desiccating process, under good weather conditions, will be finished in the shock. Not so with combine wheat. A mass of unripe wheat put in a bin will soon start heating because in each kernel there is too much vital activity. Therefore, when combines are used, the wheat should be fully ripe. If the kernels stay in the wheat heads until they fall on the apron, then there is no further danger of loss from shattering. It may be that in the future we shall pay more attention to properties in wheat which make it more adapted to the use of the combine. This may be said: Since the combine saves so much labor in harvesting, some of that saving should be used for better care of the wheat after it is binning. With the older methods, the wheat producer could forget about his wheat as soon as threshed, excepting the question when to sell. Not so with the combine wheat. It needs watching.

The Kansas Agricultural Experiment Station has for several years been studying the changes which take place in the combine wheat after binning. At first we used what may be called the survey method. That is a number of bins on farms where combines were used were selected for study. The wheat was sampled when it went into the bin and then at several subsequent periods. Observations were also made on temperature changes. Most samples were tested merely for moisture, but on a number there were made milling, baking and chemical tests. On the crop of 1924, 38 samples were so tested, and on the crop of 1925, 25 samples. From these results we learned that there is little danger of heating and damage to combine wheat if it is fully ripe when cut and if it is not accidentally wetted by rain. In 1923 the wheat ripened evenly and no damage resulted. The same was true of the crop of 1925. In 1924, however, the wheat ripened unevenly and some was

cut on the green side. That year heating took place in several bins and serious damage resulted. This was so serious that when small amounts of this bin burnt wheat was mixed with sound wheat and then milled and baked, poor results were obtained. Some heating took place when the moisture was a little less than 14 per cent at the time the wheat was binning. When the moisture was higher than this, the damage was much more serious.

The survey method has too many limitations. In 1923 and 1925, the harvesting conditions were so good that no information was obtained as to the danger points for moisture and heat. It was therefore decided to conduct these experiments under laboratory controlled conditions. From the crop of 1927, a field of uniform wheat grown on the Agronomy Farm, at Manhattan, was selected. This was cut under four stages of maturity; namely, very green, on the green side, barely ripe, and dead ripe. The first was intended to be greener than anyone would attempt to harvest with a combine, the second such as would be found in spots or in low places of the field, the third the earliest anyone would cut with a combine, and the fourth wheat fully ripe when there is no danger of damage. The unforeseen often happens in experimental work. In 1927, the wheat ripened very unevenly, not in spots in the field, but as individual heads. For instance, in the third stage of cutting, it was possible to find heads in all conditions of maturity, from those in the milk or dough condition to those fully ripe. For this reason it was difficult to judge the stage of ripeness and the results were not exactly what was planned. Also the long fruiting period produced a weak wheat in the fourth or last stage. For this reason results on the fully ripe wheat were not satisfactory.

As soon as each stage of the wheat was cut it was threshed and then used for the heating experiment. The general plan was to heat five-pound samples at four different temperatures for one to ten days. The temperatures were 104°, 113°, 122°, and 131° F. The wheat samples were placed in gallon, flat tin cans, such as are used for holding lubricating oil. The cans were closed with cotton plugs so as to prevent loss of water, but not so closely as to prevent escape of expanding air or carbon dioxide gas. The heating was done in specially constructed well insulated wooden boxes or bins. The heat was produced by electric heating elements under thermostatic control and the air inside the bin was kept in circulation with a small fan. In this way each sample of wheat was subjected to exactly the conditions as planned for the experiment. It was possible to control the temperatures in all parts of each bin within one degree. Wheat from each stage was placed in each one of the bins and the length of heating was from one to ten days, except for stage one when the time was from one to five days. Thus there were 40 samples from stage one heated from one to five days at half day intervals; stage two, 40 samples heated from one to 10 days at one day intervals, and a similar number from stage three and four heated from one to 10 days at one day intervals. This made 160 samples, each one treated differently from the rest in one or more respects. Each sample was weighed when placed in the bin

and when removed. There was practically no loss of moisture. As soon as a sample was removed from the bin, the wheat was emptied into shallow paper boxes, where cooling and drying took place rapidly. When fully air dry, the wheat was returned to the can. These samples were then milled and the flour baked. Germination tests were also made on all these heated wheats.

Viability of Percentage of Germination

Samples for viability tests were taken as soon as the heated samples were air dry. These determinations were made by the Kansas Seed Testing Laboratory. Before wheat is fully matured, a very little heating kills the wheat, but after full maturity the wheat may be heated for 10 days at 122° F. and at 131° F. for five days without apparent injury to the viability.

Test Weight

Wheat cut in the first stage was so full of chaff that it had to be scoured before the test weight could be taken. This gave a larger test weight for this stage than for subsequent stages, and these should not be compared with the other three stages. Results obtained on stages two, three and four, show that there was an increase in test weight as the wheat matured. That is, a lower test weight is obtained when wheat is harvested before fully ripe.

Summary

- We have shown in this paper:
1. Carefully controlled use of heat on fully matured, but new wheat, will bring about an improvement in baking qualities. However, if the degree of temperature is too high or if the period of heating is too long, marked damage may result.
 2. When heating takes place under uncontrolled conditions, such as happen when wheat is cut immature, and stacked with too much moisture, or when cut with the combine when not sufficiently matured, serious damage results. No damage results in combine wheat if cut when fully mature and when it is not wetted by rain.
 3. Controlled heating will improve immature wheat when the degree of temperature is not too high nor the period of heating too long. The main purpose of this experiment was to find the limits of time and temperature at which wheat could be safely heated. The experiments will be repeated in order to determine more accurately the practical applications. This procedure will be used to determine the safe limits of heat in tempering wheat.

The E. G. Lewis Seed Company of Media, Ill., has gone into bankruptcy. E. G. Lewis was president of the firm.

A petition in bankruptcy has been filed by Jacob Schief, hay and grain dealer of New Bedford, Mass. His liabilities are \$23,722 and assets, \$9,100.

A voluntary petition in bankruptcy has been filed by Pratz, Kime & Kratz at Waterloo, N. Y., which has liabilities of \$150,000. The company has been doing a grain, feed and produce business.

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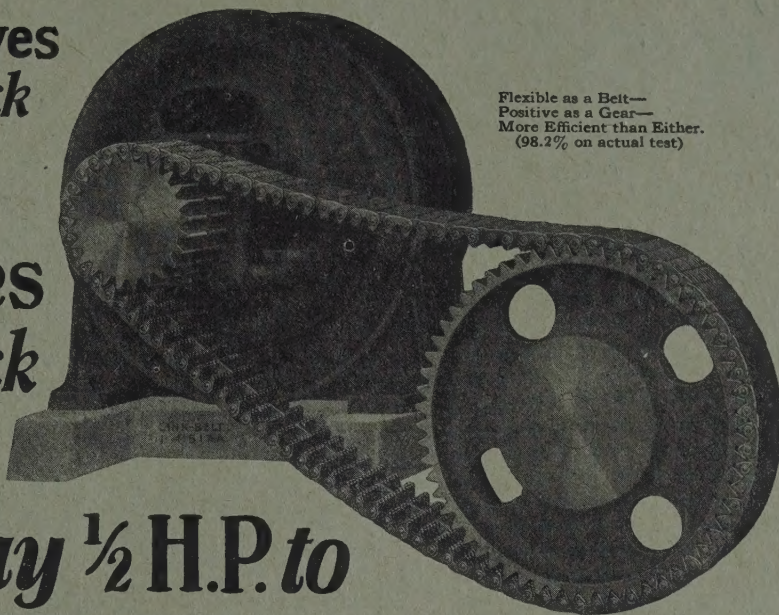
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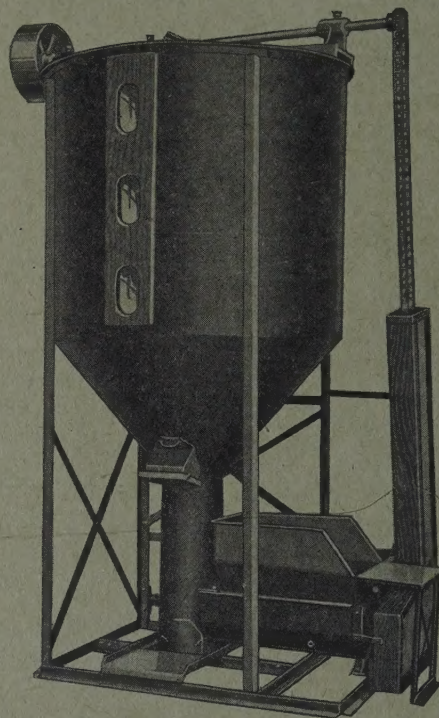
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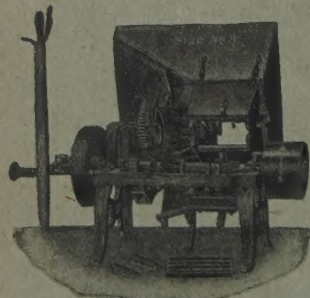
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